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**MODELING THE RELATIONSHIP BETWEEN
ORGANIZATIONAL JUSTICE, JOB BURNOUT AND
ORGANIZATIONAL COMMITMENT AMONG UNIVERSITY
TEACHERS
RELACIÓN ENTRE JUSTICIA ORGANIZACIONAL,
DESGASTE PROFESIONAL, Y COMPROMISO
ORGANIZACIONAL EN PROFESORES UNIVERSITARIOS**

**MEMORIA PARA OPTAR AL GRADO DE DOCTOR
PRESENTADA POR**

Yongzhan Li

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Gloria Castaño Collado

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UNIVERSIDAD COMPLUTENSE DE MADRID
FACULTY OF PSYCHOLOGY

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DOCTORAL DISSERTATION

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With all the gratitude, I will go on exploring and progressing so as to requite this great world to my best.

EXTENDED SUMMARY

Introduction

Organizational commitment is widely considered in the management and behavioral science literature as a key factor in the relationship between organizations and individuals (Mirza, Redzuan, Hamsan, & Shahrimin, 2012). According to Meyer and Allen (1991), organizational commitment comprises three types of commitment: affective, continuance and normative commitment. As a consequence, organizational commitment has been found to be predicted by quite a few of organizational variables. Of all the influencing factors, organizational justice and job burnout are two important ones (Meyer & Allen, 1997).

Organizational justice has long been considered an explanatory variable in organizational research (Adams, 1965; Leventhal, 1976). It reflects the degree to which individuals believe the outcomes they receive and the ways they are treated within organizations are fair, equitable, and in line with expected moral and ethical standards (Cropanzano, Bowen, & Gilliland, 2007). In the extant literature, justice has been conceptualized based on four dimensions: distributive justice, procedural justice, interpersonal justice and informational justice (Colquitt, 2001).

Many studies indicated that organizational commitment, in part, was shaped by perceptions of fair treatment by managers and organizations (Cohen-Charash & Spector; 2001; Ponnu & Chuah, 2010). From overall perspective, for example, Tallman et al. (2009) demonstrated that employees who believed that they were treated fairly would be more likely to hold positive attitudes toward the organization, and be more committed to the organization. From dimensional perspective, for example, Cohen-Charash and Spector (2001) found that both distributive and procedural justice was positively related with affective commitment.

Organizational justice is not only related to organizational commitment, but also related to job burnout. Although the dimensions of organizational justice are potentially related to burnout, research generally has supported the predominance of procedural, interpersonal and informational justice over distributive justice in explaining individual burnout (Moliner, Martínez-Tur, Ramos, & Peiró, 2005).

Burnout has been a hot topic in the field of organizational behaviors over the previous three decades. By far, the Maslach Burnout Inventory (MBI) is generally accepted as most commonly used instrument to assess the burnout syndrome in the empirical literature (Maslach & Jackson, 1981, 1993; Maslach, Jackson, & Leiter, 1996). According to MBI, burnout is defined as a three-dimensional syndrome including emotional exhaustion, depersonalization and reduced personal accomplishment.

Besides organizational justice, job burnout is also related to organizational commitment. For example, Hakanen et al. (2008) reported that increased burnout diminished the levels of commitment significantly.

Although it is reasonable to propose that job burnout is a mediator between organizational justice and organizational commitment, little empirical research can be found to examine this hypothesis. Therefore, the present study focused on the relationship between organizational justice, job burnout and organizational commitment within an academic environment through structural equation modeling, in particular, to test the hypothesis that job burnout is a mediator between organizational justice and organizational commitment.

Objectives

1. To observe and compare the difference in the levels of organizational justice perception, burnout, and organizational commitment in terms of demographic variables among Chinese university teachers.

2. To examine the relationship between organizational justice, burnout and organizational commitment among Chinese university teachers.

3. To examine the effects of organizational justice, burnout and organizational commitment on academic performance among Chinese university teachers.

4. To determine whether a mediating model, in which burnout mediates the relationship between organizational justice and organizational commitment, can explain the relationship between these three constructs.

5. According to the results, to propose the pertinent strategies of intervention to improve the levels of organizational commitment among Chinese university teachers.

Results

The results indicated that some demographic variables were related to organizational justice, job burnout and organizational commitment among university teachers. Particularly, *length of teaching service* influenced almost all the dimensions of the three constructs of interest, only with exception of continuance commitment. In addition, organizational justice, job burnout influenced some academic performance variables. Of note is that OJ was positively related to five out of the total six academic performance variables, except the *Books* published in the last three years. However, the current study didn't find influence of organizational commitment on the academic performance variables of interest. Furthermore, the current study showed that job burnout played a mediating role in the relationship between organizational justice and organizational commitment, just as expected. Specifically, emotional exhaustion was an important partial mediator between interactional justice and affective commitment and between interactional justice and normative commitment; while between interactional justice and continuance

commitment, emotional exhaustion played full mediating role. As for personal accomplishment and depersonalization, the former partially mediated the relationship between interactional justice and affective commitment, while the latter was a partial mediator between interactional justice and normative commitment.

Conclusions

The present study mainly examined the relationship between organizational justice, job burnout, and organizational commitment among Chinese university teachers, particularly, corroborated the mediating effect of job burnout between organizational justice and organizational commitment. Meanwhile, the present study explored the effects of certain demographic variables on the former three variables, and also tested the effects of these three variables on certain academic performance variables to prove their importance. The results and the methods of the present study provided both theoretical and practical implications.

Theoretically, first, this study confirmed that in the context of Chinese university, the three questionnaires (MBI-ES, OJQ, OCQ) developed by occidental researchers had cross-cultural applicability. To be noted, when applied to Chinese university teachers, according to the results of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), OJQ only had three dimensions, rather than four dimensions as declared by the original author. The above findings contributed empirical evidence to cross-cultural research on the three specific structures just mentioned, meanwhile, also laid the groundwork for further exploring the relationships between these variables and others.

Second, the present study represented the theoretical or empirical research regarding the antecedents and consequences of organizational justice,

organizational commitment, and job burnout within the context of Chinese university, thus, enhanced our understanding of the relationship between organizational justice, organizational commitment, and job burnout.

Third, of note is that, the current study applied structural equation modeling (SEM) to test the relationships among the just mentioned variables of interest. SEM tolerates independent variables and dependent variables containing measurement errors, and treats multiple dependent variables simultaneously. Thus, compared with traditional regression analysis, SEM possesses prodigious superiority, enhancing the effectiveness of research results.

As for practical implications, the findings of this study provided university managers with insights into the formations of teachers' organization commitment, as well as with theoretical foundation for decision-making on human resource management (HRM) so as to improve university performance.

Given some demographic variables were related with organizational justice, job burnout and organizational commitment, university managers should carry out stratified management according to different groups of university teachers. Since the finding that job burnout partially mediated the relationship between organizational justice and organizational commitment, that is, organizational justice directly positively influenced organizational commitment; meanwhile, it also indirectly positively influenced organizational commitment via its reducing job burnout, it is justifiable for university managers to enhance teachers' organizational commitment through adjusting the levels of their organizational justice and job burnout.

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CHAPTER I

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Organizational commitment (OC) is an important factor in understanding employees' work-related attitudes and behaviors. For numerous scientists and practitioners, organizational commitment is always a remarkable issue (Gemlik, Sisman, & Sigri, 2010; Hakanen, Schaufeli, & Ahola, 2008; Meyer & Allen, 1997; Pool & Pool, 2007; Solinger, Van Olffen, & Roe, 2008). Many researchers argue that if properly managed, organizational commitment can lead to beneficial consequences such as improved organizational effectiveness and performance (Conway & Briner, 2012; Gbadamosi & Chinaka, 2011). Moreover, it is also argued that the high degree of attention devoted to this form of commitment stems from the fact that it is theory-based, broad in focus, holds significant integrative potential, and may be more manageable than other forms (Griffin & Bateman, 1986).

As the organization of producing and disseminating knowledge and culture, university is the main seedbed of the basic research and technological innovation, shouldering the important task of providing innovative talents and impulsing the economic development and social progress. As the members of university organization, university teachers are the main force of cultivating talents, and their strong sense of responsibility and high spirit of dedication to work are especially important for university development and students growth. It is essential for university to foster a strong contingent of teachers with high quality, in particular, high levels of commitment to the organization.

A large number of studies focusing on the nature of organizational commitment have been conducted, and quite a few of organizational factors have been related to organizational commitment; however, it is not clear yet how those relevant factors can be managed to promote organizational commitment (Beck & Wilson, 2001). Of all the factors associated with

organizational commitment, organizational justice and job burnout are two important ones (Meyer & Allen, 1997). Nevertheless, the specific manner in which these factors together affect organizational commitment is not yet well known. Empirical evidence is needed to clarify the development of organizational commitment. Therefore, the current study seeks to examine the relationship between job burnout, organizational justice and organizational commitment among Chinese university teachers so as to know the actual work state of Chinese university teachers, and to provide administrators and policy makers of university with pertinent strategies of intervention.

In order to illustrate well the questions the present study concerns, a brief introduction is offered as follows:

1.1.1 Organizational Commitment

Organizational commitment is widely considered in the management and behavioral science literature as a key factor in the relationship between organizations and individuals (Mirza, Redzuan, Hamsan, & Shahrinin, 2012). As a construct, organizational commitment has been defined and redefined numerous times. Previous research has shown a general disagreement over what this construct is and how to measure it. According to the prior literature, three approaches that have had the greatest impact on theory and research to date are the behavioural, attitudinal and integrated approaches (Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982; Salancik, 1977; Staw, 1977). In the behavioural approach, commitment is viewed as a tendency to continue a particular line of activity (Salancik, 1977; Staw, 1977). The attitudinal approach views commitment as an attitude of attachment to the organization (Mowday, Steers, & Porter, 1979; Porter, Crampon & Smith, 1976; Porter, Steers, Mowday, & Boulian, 1974). The integrated approach considers

commitment as a multidimensional construct (Meyer & Allen, 1991; O'Reilly & Chatman, 1986). The most popular multidimensional approach to organizational commitment is that of Meyer and Allen (1991). Meyer and Allen (1991) identified three types of commitment: affective commitment, continuance commitment, and normative commitment. Affective commitment reflects the strength of the employees' emotional attachment to, identification with, and involvement in the organization. Continuance commitment can be described as the employees' awareness of the cost of leaving the organization. Normative commitment refers to the employees' feelings of obligation to remain in the organization.

Meyer, Allen, and Smith (1993) stated that the research generally shows that those employees with a strong affective commitment will remain with an organization because they *want to*, those with a strong continuance commitment remain because they *have to*, and those with a normative commitment remain because they feel that they *should to*.

In the past several decades, the concept of organizational commitment (OC) has received a great deal of empirical research both as an antecedent of some work-related variables and as a consequence of other variables. As an antecedent, OC has been used to predict organizational efficiency and effectiveness (Beck & Wilson, 2000; Gbadamosi & Chinaka, 2011), employees' performance (Conway & Briner, 2012; Hunter & Thatcher, 2007), turnover (Aydogdu & Asikgil, 2011; DeConinck & Bachmann, 2011), absenteeism (Chughtai & Zafar, 2006; Samad & Yusuf, 2012), and organizational citizenship behaviors (Ahmad, Shahzad, Rehman, Khan, & Shad, 2010; Stanley, Herscovitch, & Topolnytsky, 2002).

As a consequence, according to Meyer, Stanley, Herscovitch, and Topolnytsky (2002), organizational commitment can be predicted by variables as the following categories: demographic variables (age, gender, education,

tenure, marital status), individual differences (locus of control, self-efficacy), work experiences (organizational support, organizational justice, role ambiguity and role conflict), and alternatives/investments (alternatives, investments, transferability of education and transferability of skills). In addition, other variables have also been suggested to influence organizational commitment including employee's trust (Jik & Hanjun, 2011; Laka-Mathebula, 2004), organizational size, organizational culture (Manetje & Martins, 2009; Wang & Hwang, 2007), leadership style (John, 2010; Lo, Ramayah, & Min, 2009), job level (Omolara, 2008), and job burnout (Gemlik et al., 2010; Hakanen et al., 2008). Among these, organizational justice and job burnout are two factors which are closely related with each other, and may relatively easy to be intervened by organization to influence organizational commitment among employees.

1.1.2 Organizational Justice

Organizational justice has long been considered an explanatory variable in organizational research (Adams, 1965; Deutsch, 1975; Leventhal, 1976). It reflects the degree to which individuals believe the outcomes they receive and the ways they are treated within organizations are fair, equitable, and in line with expected moral and ethical standards (Cropanzano, Bowen, & Gilliland, 2007). Before 1975, the study of justice was primarily concerned with distributive justice (Adams, 1965). With the publication of their book summarizing disputant reactions to legal procedures, Thibaut and Walker (1975) introduced the concept of procedural justice. Then, Bies and Moag (1986) introduced the further advance in the justice literature by focusing attention on the importance of the quality of the interpersonal treatment people receive when procedures are enacted or implemented. Bies and Moag (1986)

referred to this aspect of justice as “interactional justice”. More recently, interactional justice has come to be seen as two specific types of interpersonal treatment, i.e., interpersonal justice and informational justice (Greenberg, 1990a, 1993a). Thus in the extant literature, justice has been conceptualized based on four dimensions: distributive justice, procedural justice, interpersonal justice and informational justice (Colquitt, 2001). Distributive justice means the perceived fairness of the outcomes. Procedural justice refers to the perceived fairness of the means used to determine those outcomes (Cropanzano & Greenberg, 1997; Folger & Konovsky, 1989). Interpersonal justice reflects the degree to which people are treated with politeness, dignity, and respect by authorities or third parties involved in executing procedures or determining outcomes. Informational justice focuses on the explanations provided to people that convey information about why procedures were used in a certain way or why outcomes were distributed in a certain fashion (Greenberg, 1990a, 1993a).

One of the most central goals of organizational psychology is to develop an understanding of attitudes and behaviors in work settings (Gilliland & Chan, 2001). In pursuit of this goal, a body of previous research has focused on the relationship between perceived inequities in exchange relationships at work, and a range of work outcomes such as turnover, performance, organizational commitment and burnout. At the heart of equity theory lies the assumption that people pursue a balance between what they “invest” in a particular relationship (such as time, skills, effort) and the benefits they gain from it (such as status, appreciation, gratitude, and pay) (Adams, 1965; Buunk & Schaufeli, 1999). Equity theory also assumes that the stress ensuing from a disturbed balance between investments and outcomes leads people to attempt to restore this balance (Adams, 1965). Some of the outcomes mentioned above can indeed be considered more or less conscious strategies to obtain a more equitable balance,

either by decreasing one's investments in this relationship (e.g., through behavioral withdrawal by leaving the organization, or through psychological withdrawal in the form of diminished commitment to the organization or depersonalization regarding the recipients of one's services), or by increasing the benefits gained from an exchange relationship (e.g., employee theft). Thus, disturbance of this balance is expected to result in negative outcomes such as absenteeism and turnover (Banks, Patel, & Moola, 2012; Boer, Bakker, Syroit, & Schaufeli, 2002; Byrne, 2005), employee theft (Shapiro, Trevino, & Victor, 1995), low job performance (Cropanzano, Prehar, & Chen, 2002), and job burnout (Maslach & Leiter, 2008; Taris, Van Horn, Schaufel, & Schreurs, 2004).

Through research in different organizational areas, organizational justice has emerged as an important determinant of attitudes, decisions and behaviors (Gilliland & Chan, 2001). Many studies indicated that organizational commitment, in part, was shaped by perceptions of fair treatment by managers and organizations (Cohen-Charash & Spector, 2001; Fatt, Khin, & Heng, 2010; Fulford, 2005; Najafi, Noruzy, Azar, Nazari-Shirkouhi, & Dalvand, 2011; Ponnu & Chuah, 2010; Tallman, Phipps, & Matheson, 2009). For example, According to Tallman et al. (2009), procedural justice makes the employees consider that managerial and organizational decisions are legitimate and this legitimacy promotes commitment of the employees to their organizations. Tallman et al. (2009) also found that employees who believed that they were treated fairly would be more likely to hold positive attitudes toward the organization, outcomes and supervisors, and be more committed to the organization. Based on brief review of literature, Colquitt (2001) argued that the justice perceived by employees can increase their positive perceptions and behaviors toward the organization, such as job satisfaction, job engagement, organizational commitment, organizational identification, trust, performance,

and organizational citizenship behaviors. However, if employees perceive that they are treated unfairly, in order to reduce and eliminate this negative perception, they will take some measures usually harmful to organization and other persons, even to themselves, such as theft, counterproductive behaviors, absenteeism, and burnout. Fulford (2005) showed that organizational justice perception of hotel employees had an impact on their commitment. Thus, it becomes critical that hotel managers be very sensitive to how their decisions and the methods they use to reach their decisions will be perceived by their employees. In line with these results, Ponnu and Chuah (2010) suggested that as perceptions of organizational justice increase, so will the employees' organizational commitment. However, there are still a few of studies with discrepant findings. For example, Griffin and Hepburn (2005) demonstrated that correctional officers at Arizona did not perceive any significant association between organizational justice and organizational commitment.

Besides from overall perspective, some researchers have also studied organizational justice from dimension perspective (Aryee, Budhwar, & Chen, 2002; Bakhshi, Kumar, & Rani, 2009; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Ramamoorthy & Flood, 2004). Lambert, Hogan, and Griffin (2007), for example, found that procedural justice and distributive justice significantly contributed to employees' organizational commitment. Similarly, Murtaza, Shad, Shahzad, Shah, and Khan (2011) also reported that both distributive and procedural justice had significant effects on employees' organizational commitment.

Perception of organizational justice appears to be one of the most important reasons for especially affective commitment. Cohen-Charash and Spector (2001) found that both distributive justice and procedural justice were positively related with affective commitment. Ramamoorthy and Flood (2004) also demonstrated that the higher the levels of perceived distributive justice

and procedural justice of employees, the higher the levels of their commitment to the organization; both the procedural and distributive justice perceptions were related with affective commitment.

Konovsky and Cropanzano (1991) suggested that organizational justice has no effect on continuance commitment because continuance commitment emerges when individual feels powerlessness to resign, other than feels identification with the organization.

Interestingly, research indicates that both distributive justice and procedural justice are related to organizational commitment; however, the relationships between the two dimensions of organizational justice and commitment are controversial. For example, some researchers suggested that procedural justice was a better predictor for employees' commitment to the organization than distributive justice (Elanain, 2010; Ponnu & Chuah, 2010), whereas other researchers reported a stronger relationship for distributive justice and organizational commitment than for procedural justice and organizational commitment (Greenberg, 1994; Lowe & Vodanovich, 1995).

In addition to the relative effects of distributive and procedural justice on attitudes, there is other evidence that distributive and procedural justice interact to affect attitudes such as organizational commitment (Brockner & Wiesenfeld, 1996; McFarlin & Sweeney, 1992; Robbins, Summers, & Miller, 2000). Through examining interactive effects, McFarlin and Sweeney (1992) found that organizational commitment was predicted by the interaction between procedural and distributive justice in that procedural justice had a stronger effect on organizational commitment when distributive justice was low and distributive justice had a stronger effect on organizational commitment when procedural justice was low. That is, distributive and procedural justice may compensate for one another: When procedural justice is low, outcomes are most likely to affect reactions, and vice versa. Robbins, Summers, and Miller

(2000) also proved the reciprocal association among distributive justice and procedural justice with organizational commitment.

Other results support the agent-system model, in which procedural justice is a stronger predictor of organizational commitment than interpersonal or informational justice (Colquitt et al., 2001; Masterson, Lewis, Goldman, & Tylor, 2000).

Masterson et al. (2000) provided evidence that interactional justice perception (including interpersonal and informational justice perceptions) was most strongly related to supervisor-related outcomes such as job satisfaction, whereas procedural justice perception was most strongly related to organization-related outcomes such as organizational commitment.

Current researchers continue to examine relationships between justice and attitudes, but are looking at more complex mediating and moderating relationships (Ehrhardt, Shaffer, Chiu, & Luk, 2012; Elanain, 2010; Lee, Murrmann, Murrmann, & Kim, 2010). For example, using a sample of Hong Kong employees, Ehrhardt et al. (2012) found that perceptions of distributive, procedural and interactional justice mediated the relationship between the strength of one's Hong Kong "national" identity and normative commitment; while perceptions of distributive and interactional justice mediated the relationship between the strength of one's Hong Kong "national" identity and affective commitment. Additionally, researchers have also searched for mediators of the relationships between different types of justice and attitudes. For example, Elanain (2010) reported that job satisfaction played a partial role in mediating the influence of organizational justice on organizational commitment and turnover intention.

1.1.3 Job Burnout

Burnout has been a hot topic in the field of organizational behaviors and human resource management over the previous three decades. Initially, burnout has been viewed as resulting from occupational stress among people working in the human services (Freudenberger, 1974; Maslach, 1976). But later the concept of burnout has been extended to occupations beyond the human services (clerical, computer technology, military, managers) (Maslach, Schaufeli, & Leiter, 2001). The initial scientific articles on burnout served to identify, describe, and name an existing social problem based on observations. These observations were neither systematic nor standardized (Maslach & Schaufeli, 1993; Schaufeli & Enzmann, 1998). In the 1980s, the works on burnout shifted to more systematic empirical research. These works were more quantitative in nature, utilizing questionnaire and survey methodology, and studying larger subject populations to provide standardized assessments (Pines & Aronson, 1988; Pines, Aronson, & Kafry, 1981).

Just like many other concepts, burnout has been defined by numerous researchers in many ways (Freudenberger, 1974; Maslach, 1976; Samson, 1983; Shirom, 1989). By far, although there is still no consensus on burnout definition, the confusion of conceptual definition has been reduced by the general acceptance of the Maslach Burnout Inventory (MBI) as most commonly used instrument to assess the burnout syndrome in the empirical literature (Maslach & Jackson, 1981, 1993; Maslach, Jackson, & Leiter, 1996; Schaufeli, Leiter, Maslach, & Jackson, 1996). Therefore, traditionally, burnout is defined as a three-dimensional syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 2001). Emotional exhaustion refers to feelings of being emotionally overextended and depleted of one's emotional resources. Depersonalization

involves a negative, indifferent, or overly detached attitude to others. Finally, reduced personal accomplishment refers to feelings of incompetence and a lack of achievement in one's work.

Buunk and Schaufeli (1993) attempted to connect social exchange processes in the context of work organization with burnout. They started from the assumption that burnout develops primarily within the social and interpersonal context of work organization. Thus, attention should be paid to the way individuals perceive, interpret and construct the behaviors of others at work. Following Maslach (1993), Buunk and Schaufeli focused on the demanding interpersonal relationship between a provider of services and the recipients. This relationship is complementary by definition, in that one party gives, and the other receives. Because provider and recipient enter their relationship with different expectations toward each other, it is difficult to establish an equitable relationship (Maslach, 1993). While this complementary relationship forms the basis of the exchange relationship between provider and recipient, the first will continue to look for some rewards from the latter in return for their efforts, e.g., teachers expect their students to show some gratitude, respect, or at least to try to obtain good grades. In practice, however, these expectations may not be met (Maslach, 1993). As a result, providers may feel over time that they continually invest more in the relationship with the recipients of their services than they receive in return. This eventually depletes their emotional resources and, thus leads to emotional exhaustion (the core component of burnout), depersonalization (as a way of coping with this exhaustion), and feelings of reduced personal accomplishment (Leiter & Maslach, 1988). This reasoning has been confirmed in studies among general practitioners (Bakker et al., 2000; Houkes, Winants, & Twellaar, 2008; Nielsen & Tulinius, 2009), hospital nurses (Lasebikan & Oyetunde, 2012; Lee & Akhtar, 2007; Schaufeli, Van Dierendonck, & Van Gorp, 1996), and teachers

(Fisher, 2011; Hakanen, Bakker, & Schaufeli, 2006; Van Horn, Schaufeli, & Taris, 2001).

However, it has been argued that burnout should not only be examined in the context of interpersonal relationship at work, but also in the context of exchange relationship with organization (O'Driscoll & Cooper, 1996). A body of evidence adds credence to this notion, showing that characteristics of the job and the organization are associated with the onset of burnout (Cordes & Dougherty, 1993; Koustelios, 2009; Kushnir & Cohen, 2008). Although little research favoring an organizational perspective on burnout has provided a psychological explanation for the development of burnout in the organizational settings, according to Schaufeli et al. (1996), the notion of a psychological contract between employer and employee (Robinson & Rousseau, 1994) provides a useful starting point for such an explanation. The psychological contract is defined as a set of expectations that employees hold about the nature of their exchange relationship with their organization, e.g., concerning workload and pay. More specifically, the psychological contract reflects the employees' subjective notion of equity and serves as a baseline against which own investments and benefits are evaluated. A violation of the psychological contract may result in negative work outcomes, including a higher intention to quit and higher turnover (Haq, Jam, Azeem, Ali, & Fatima, 2011; Kim, Trail, Lim, Kim, 2009), absenteeism (Cross, Barry, & Garavan, 2008; Deery, Iverson, & Walsh, 2006), and burnout (Bashir, Nasir, Saeed, & Ahmed, 2011; Muhammad, Inam, Farooq, Ahmad, & Syed, 2010). This is consistent with Brill's (1984) notion of burnout as "an expectationally mediated, job-related dysphoric and dysfunctional state" (p. 15). Thus, unmet expectations about reciprocity lie at the core of a violation of the psychological contract.

There is specific evidence relating organizational justice to burnout at the individual level (Cropanzano, Goldman, & Benson, 2005). Brotheridge (2003)

observed that perceptions of distributive and procedural justice decreased workers' emotional exhaustion. Lambert et al. (2010) revealed that both distributive and procedural justice had a statistically significant negative association with burnout. Although the dimensions of organizational justice are potentially related to burnout, research generally has supported the predominance of procedural, interpersonal and informational justice over distributive justice in explaining individual burnout (Moliner, Martínez-Tur, Ramos, & Peiró, 2005; Schminke, Ambrose, & Cropanzano, 2000). The results obtained by Brotheridge (2003) also confirmed this general trend. She found that the relative impact of procedural justice on emotional exhaustion was greater than that of distributive justice.

Job burnout is closely related not only to organizational justice but also to organizational commitment (Gemlik et al., 2010; Hakanen et al., 2008; Jung & Kim, 2012) and job performance (Abdullah & Fong, 2011; Janssen, Lam, & Huang, 2009). Many researchers (Burke & Greenglass, 1995; Gemlik, Sisman, & Sigri, 2010; Hakanen, Schaufeli, & Ahola, 2008; Moon & Hur, 2011) have found the emotional exhaustion to be a strong predictor of job satisfaction, commitment and performance. For example, Hakanen et al. (2008) reported that increased burnout diminished the levels of commitment significantly.

Although a great deal of research demonstrates that job burnout affects organizational commitment, different results of the specific relationship between the dimensions of these two constructs have been reported. Li and Zhong (2009) examined the relationship between job burnout and organizational commitment among the middle level managers. The results revealed that job burnout was negatively related with organizational commitment; wherein, depersonalization and reduced personal accomplishment affected affective commitment negatively, while emotional exhaustion and reduced personal accomplishment affected continuance

commitment negatively. However, based on exploring the relationship model of teachers' commitment, teaching efficacy and job burnout in primary and middle schools, Li and Yong (2010) indicated that, except for continuance commitment, teachers' affective commitment and normative commitment negatively correlated significantly with emotional exhaustion, depersonalization and reduced personal accomplishment.

Of note is that a literature based on a quantitative summary of findings (Mathieu & Zajac, 1990) argued that while most research has considered simple linear relationships, there is a need to explore which mediators affect the relationships between organizational commitment and its antecedents.

Although it is reasonable to propose that job burnout is a mediator between organizational justice and organizational commitment, little empirical research can be found to examine this hypothesis, not to mention through a structural equation model simultaneously including the three constructs of interest. Given this, it is imperative that more research should to be done around this area. Therefore, the main purpose of the present study is to determine the relationship between organizational justice, job burnout and organizational commitment within an academic environment through structural equation modeling, in particular, to test the hypothesis that job burnout is a mediator between organizational justice and organizational commitment.

1.2 PURPOSES OF THE STUDY

It is well known, in the chain of education, the last stage of cultivating talents officially is higher education, after which, students will enter into society and contribute to varieties of work. At present, China is implementing a development strategy which relies on science and education to invigorate the country, and objectively demands university teachers to be highly committed to their organizations.

The current study mainly seeks to examine several antecedents of organizational commitment. Specifically, the principal purposes of the present study are as follows:

1. To observe and compare the difference in the levels of organizational justice perception, burnout, and organizational commitment in terms of demographic variables among Chinese university teachers.
2. To examine the relationship between organizational justice, burnout and organizational commitment among Chinese university teachers.
3. To examine the effects of organizational justice, burnout and organizational commitment on academic performance among Chinese university teachers.
4. To determine whether a mediating model, in which burnout mediates the relationship between organizational justice and organizational commitment, can explain the relationship between these three constructs.
5. According to the results, to propose the pertinent strategies of intervention to improve the levels of organizational commitment among Chinese university teachers.

Therefore, in order to understand more thoroughly the forming mechanism of organizational commitment among Chinese university teachers, particularly mediating effect of burnout on the relationship between

organizational justice and organizational commitment, the present study integrated several previous theories and research findings into a new model so as to find the specific relationship within the study variables, although this model did not present an exhaustive list of commitment causal variables. The current study suggests that the direct effect of organizational justice will weaken in predicting organizational commitment when job burnout is added into the model. The proposed relationship of these three constructs of interest is illustrated in Figure 1.1.

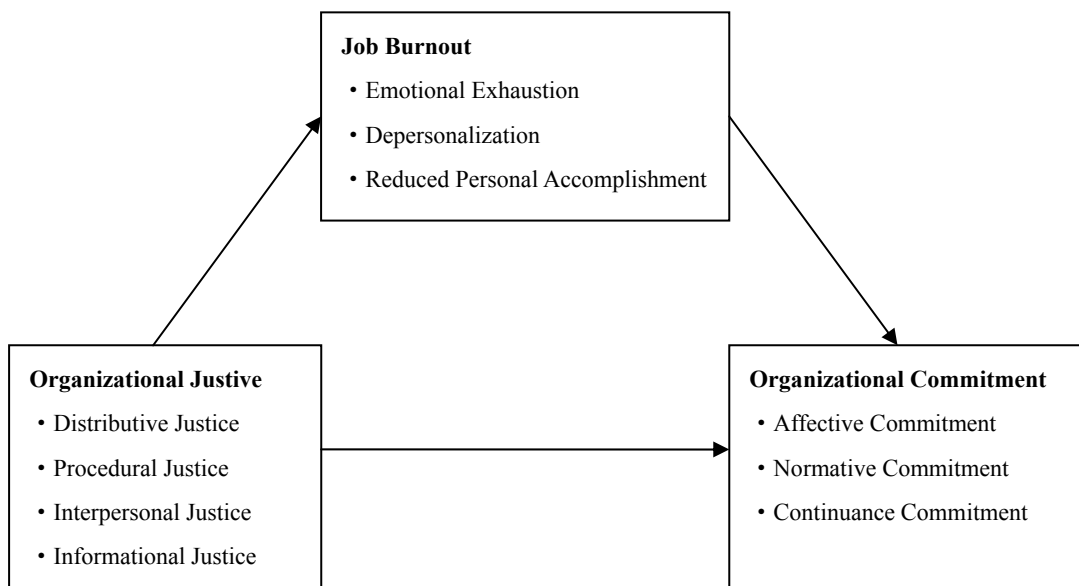


Figure 1.1. Expected relationship between organizational justice, job burnout and organizational commitment.

1.3 THEORETICAL HYPOTHESIS FRAMEWORK

The present study basically involved with three aspects of theories: organizational justice theory, job burnout theory, and organizational commitment theory. The previous research however always focused on just one or two of them, hardly studied these three theories simultaneously. Thus, to certain extent, the present study is a breakthrough. Based on literature review and the practical experiences, the current study further put forward several key questions as follows:

1. Are the levels of organizational justice, job burnout and organizational commitment different in terms of demographic characteristics among the participants?
2. Do organizational justice, job burnout and organizational commitment affect academic performance among the participants?
3. How do university teachers' organizational justice, job burnout and organizational commitment relate to each other?

Given examining the three key constructs of this study, *Question 3* was further collapsed into the following specific questions:

- 3a. Does university teachers' organizational justice negatively related to their job burnout?
- 3b. Does university teachers' job burnout negatively related to their organizational commitment?
- 3c. Does university teachers' organizational justice positively related to their organizational commitment?
- 3d. Does job burnout mediate the influence of organizational justice on organizational commitment among university teachers?

According to these questions, the current research further proposed several main research hypotheses (see Figure 1.2):

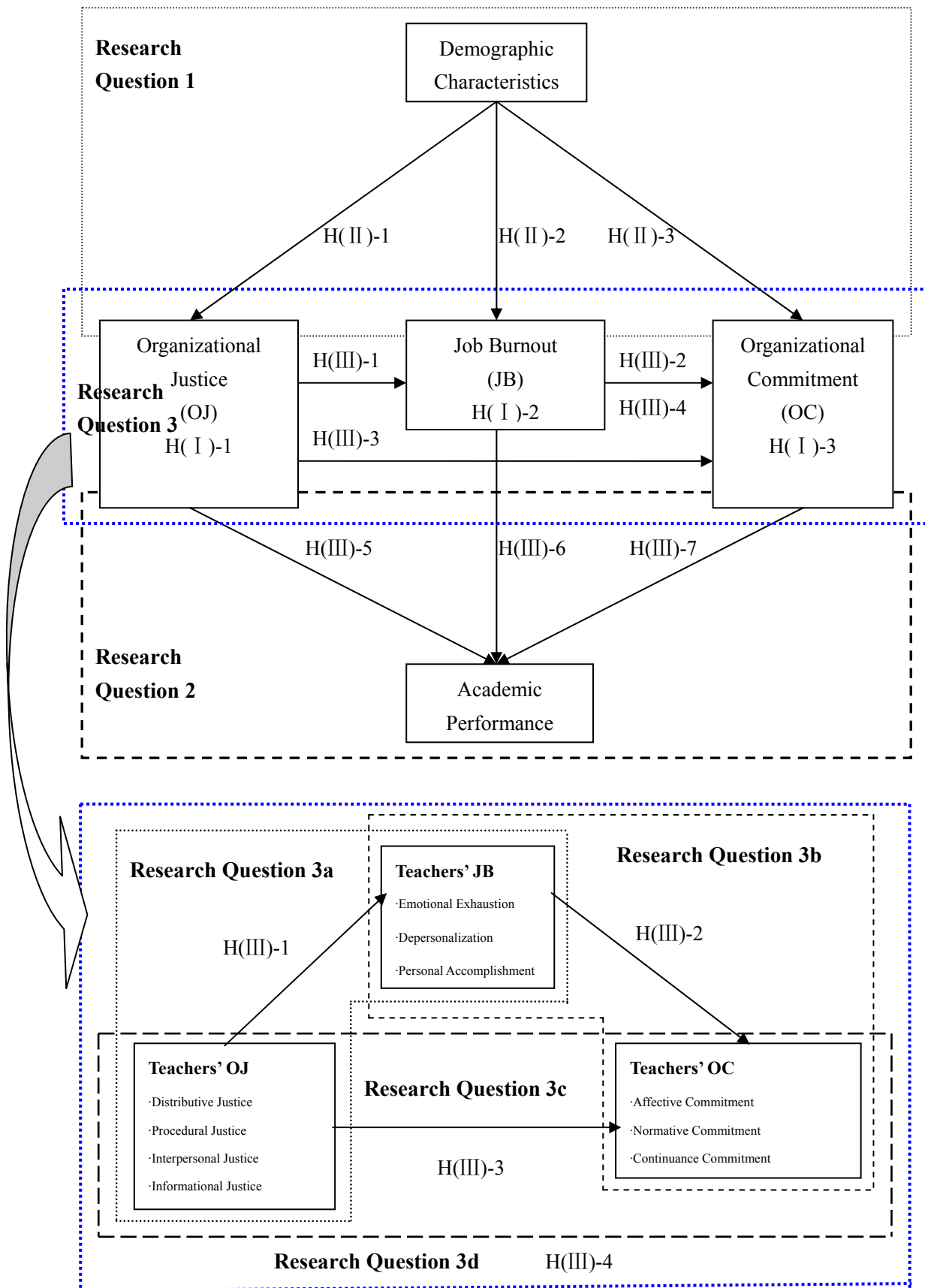


Figure 1.2. The research hypothesis framework of the current study.

The research hypotheses are classed into three categories: hypotheses on variable structure, i.e., H(I), hypotheses on variable difference, i.e., H(II), and hypotheses on relationship between variables, i.e., H(III). The specific hypotheses are described in Table 1.1.

Table 1.1.

List of the main research hypotheses

Categories	Content of hypotheses
H(I)	
H(I)-1	The four-dimensional structure of organizational justice is appropriate for Chinese university teachers.
H(I)-2	The three-dimensional structure of job burnout is appropriate for Chinese university teachers.
H(I)-3	The three-dimensional structure of organizational commitment is appropriate for Chinese university teachers.
H(II)	
H(II)-1	There are different levels of organizational justice in terms of demographic characteristics of interest (i.e., gender, age, length of teaching service, marital
H(II)-2	There are different levels of job burnout in terms of demographic characteristics of interest among the participants.
H(II)-3	There are different levels of organizational commitment in terms of demographic characteristics of interest among the participants.
H(III)	
H(III)-1	Organizational justice negatively affects job burnout.
H(III)-2	Job burnout negatively affects organizational commitment.
H(III)-3	Organizational justice positively affects organizational commitment.

Table 1.1. (continued)

Categories	Content of hypotheses
H(III)-4	Job burnout is a mediator between organizational justice and organizational commitment
H(III)-5	University teachers' organizational justice positively affects academic performance.
H(III)-6	University teachers' job burnout negatively affects academic performance.
H(III)-7	University teachers' organizational commitment positively affects academic performance.

1.4 OPERATIONAL DEFINITIONS OF TERMS

This study focused on some terms that may be familiar to many readers. However, in order to standardize the meaning of those terms for reference in this study, the terms were operationally defined:

Organizational Justice reflects the degree to which individuals believe the outcomes they receive and the ways they are treated within organizations are fair, equitable, and in line with expected moral and ethical standards (Cropanzano, Bowen, & Gilliland, 2007).

Distributive Justice refers to the perceived fairness of the outcomes that an employee receives from organizations (Folger & Cropanzano, 1998). Distributive justice is fostered where outcomes are consistent with implicit norms for allocation, such as equity or equality (Colquitt, 2001).

Procedural Justice refers to the perceived fairness of the policies and procedures used to make decisions (Greenberg, 1990a, p. 402). Procedural justice is fostered through voice during a decision-making process or influence over the outcome (Thibaut & Walker, 1975) or by adherence to fair process criteria, such as consistency, lack of bias, correctability, representation, accuracy, and ethicality (Leventhal, 1980; Leventhal, Karuza, & Fry, 1980).

Interactional Justice refers to the perceived fairness of the enactment or implementation of procedures (Bies & Moag, 1986). Interactional justice is fostered when decision makers treat people with respect and sensitivity and explain the rationale for decisions thoroughly (Colquitt, 2001; Martínez-Tur et al., 2006).

More recently, interactional justice has come to be seen as consisting of two specific types of interpersonal treatment, i.e., *Interpersonal Justice* and *Informational Justice* (Greenberg, 1990a, 1993a).

Interpersonal Justice reflects the degree to which people are treated with

politeness, dignity, and respect by authorities or third parties involved in executing procedures or determining outcomes (Colquitt et al., 2001).

Informational Justice focuses on the explanations provided to people that convey information about why procedures were used in a certain way or why outcomes were distributed in a certain fashion (Colquitt et al., 2001).

Organizational Commitment reflects a psychological state which characterizes the relationship of the employees to the organization and has implications on the employees' decision to remain or continue membership in the organization (Meyer & Allen, 1991). They further described three distinct forms of commitment:

Affective Commitment reflects the strength of the employees' emotional attachment to, identification with, and involvement in the organization. Affective commitment describes the extent to which an employee *wants to* be a part of an organization.

Continuance Commitment refers to the employees' awareness of the cost of leaving the organization. Continuance commitment describes the extent to which an employee feels he/she *has to* remain at the organization.

Normative Commitment refers to the employees' feelings of obligation to remain in the organization. Normative commitment explains the degree to which an employee feels that he/she *ought to* remain at his/her current job.

Job Burnout refers to a stress-related syndrome of affective and physiological responses to the chronic emotional strain of service delivery to others in need (Maslach, 1999), consisting of three distinct but empirically related factors:

Emotional Exhaustion represents the basic individual stress dimension of burnout and refers to feelings of being overextended and depleted of one's emotional and physical resources (Maslach et al., 2001).

Depersonalization is the cynicism aspect of burnout and is the component

that represents the interpersonal context dimension. It refers to a negative, callous, or excessively detached response to various aspects of the job (Maslach et al., 2001).

Reduced Personal Accomplishment represents the self-evaluation dimension of burnout. It refers to feelings of incompetence and a lack of achievement and productivity at work (Maslach et al., 2001).

1.5 ORGANIZATION OF THE STUDY

Chapter I has introduced the background of the present study. The research questions and hypotheses that guide the study are provided, and the purposes and significance of the study are manifested and discussed. The theoretical framework of the study is illustrated. In addition, the operational definitions of the important terms in the study are also given.

Chapter II provides a review of the literature relevant to organizational justice, job burnout and organizational commitment. The conceptualization of the above core variables is introduced, and the important theories and models are stated. The relevant antecedents and consequences of the very three variables are summarized, and the important measuring instrumentals are compared. The relationships among the constructs and previous empirical research findings relevant to this study are also discussed.

Chapter III presents the methodology to be used in the study, including participant characteristics, instrumentation, and procedures for data collection. Moreover, in order to guarantee the availability of the instruments, the present study carries out a pilot study of the survey instruments.

Chapter IV describes the results of the statistical analyses that are used to test the hypotheses.

Chapter V discusses the findings of the current study concerning the hypotheses, elaborates the implications derived from the findings of the current study, the limitations of the current study, gives recommendations for future research, and then draws conclusions for the whole research.



CHAPTER II

LITERATURE REVIEW

2.1 ORGANIZATIONAL JUSTICE

2.1.1 Conceptualization of Organizational Justice

Justice or fairness as a topic can date back to at least Plato and Socrates (Ryan, 1993). However, the term *justice* mentioned above is from the philosophical viewpoint. It is Homnas (1961) who carried social justice research into work settings, based on theory of social exchange, and later Admas (1965) who initiated the research of organizational justice, putting forward the famous equity theory.

According to Moorman (1991), organizational justice is concerned with the ways in which employees determine whether or not they have been treated fairly in their jobs and the ways in which those determinations influence other work-related variables. More recently, Greenberg and Colquitt (2005) defined *organizational justice* as subjective perception of fairness in organization, which is reflected in several different facets of employees' working lives, such as perception regarding fairness of resource distribution and decision-making. Since Admas' (1965) initial work, many dimensions of justice have been introduced into the field accounting for different possible aspects related to justice perception: outcomes, procedures, personal treatment and information (Colquitt, Greenberg, & Zapata-Phelan, 2005). The current study reviewed the transition of organizational justice conceptualization as follows:

2.1.1.1 *Distributive Justice*

Historically, the early theories of justice tended to emphasize the perceived fairness of outcome elements, i.e., *distributive justice*. Before 1975, distributive justice was the focus of much of the justice research following the

initial work conducted by Adams (1965). In fact, equity theory (Adams, 1965) was early outcome-oriented theory of social relations, concerned with people's perception of distributive fairness. According to Adams, people experience fairness when the ratio of their benefits (*Outcomes*) to contributions (*Inputs*) is commensurate with the benefits-to-contributions ratio of appropriate referents, such as coworkers. What people are concerned about is not the absolute level of outcomes itself but whether those outcomes are fair. *Inputs* are the contributions perceived by an individual as relevant to an exchange and can consist of factors such as time, attention, skills, and efforts. *Outcomes* are described as the perceived receipts from the exchange, including status, appreciation, gratitude, and pay. Perceptions of inequity lead to feelings of distress (anger or guilt, depending on whether motivate people to take action or to restructure their thinking to engender a greater sense of fairness). For example, employees experiencing negative inequity may withhold effort as a way of evening the score, whereas those feeling positive inequity may inflate their perceived contributions to make their high outcomes seem more deserved and hence fair.

Equity theorists have argued that feeling angry as well as feeling guilty is accompanied by negative feelings, and numerous studies have shown support for this hypothesis (Bunk, 1995). In general, research has shown that in organizational contexts inequity can have important motivational effects and may lead to resentment, absenteeism, and turnover (Cropanzano & Greenberg, 1997; Ponnu & Chuah, 2010). Perceived organizational inequity has also been linked to job burnout. It has been argued that because human service professionals often make high emotional investments in their work, they will be relatively sensitive to the rewards the organization provides in return, for instance, in the form of salary, positive feedback, and career advancement. When such rewards fall short of what one feels deserved relative to one's

inputs, burnout may engender.

According to equity theory, unfairness can result in uncomfortable feelings, and individual tends to try to ward off these negative feelings. Greenberg (1984) suggested that individual can change the unfair state by adjusting the real inputs and outcomes of oneself, by changing referents, or by altering the subjective perception of inputs and outcomes to get to satisfactory fair state.

Whereas Adams's theory advocates the use of equity rule to determine fairness, several other allocation rules have also been identified. Deutsch (1975, 1985) has argued that there are at least three fundamental rules of allocation: *equity* (to each according to his/her contributions), *equality* (to each the same), and *need* (to each according to his/her necessity). Other rules can be formed by combining these three. In any case, *equity*, *equality*, and *need* allow us to ascertain the fairness of a certain standard. According to relative deprivation theory, perceived injustice is resulted from a discrepancy between one's actual state-of-affairs and the outcomes of similar others (Kulik & Ambrose, 1992). Consequently, the standards for fairness are the outcomes of some (usually social) referents (Folger, 1986). Such referent standards remain important in contemporary research (Stepina & Perrewe, 1991), though they tend to be supplemented by other rules.

Reasonable as equity theory is, however, some researchers pointed out that distributive equity theory can not explain many process-oriented justice problems in organization, such as some justice problems in the process of performance evaluation and recruitment (Greenberg & Folger, 1983)

2.1.1.2 Procedural Justice

Procedural theorists have recognized the incompleteness of outcome-oriented

perspectives. That is, what people feel, think, and do are determined not only by the outcomes associated with decisions but also by the process through which decisions are planned and implemented. Research had focused on the justice of the processes that lead to decision outcomes, termed *procedural justice* (Greenberg, 1990a; Leventhal, 1980; Thibaut & Walker, 1975). Procedural justice refers to employees' perceptions of fairness in the means and processes used to determine the amount and distribution of resources (Saks, 2006). Procedural justice is fostered through voice during a decision-making process or influence over the outcome (Greenberg, 2002; Thibaut & Walker, 1975) or by adherence to fair process criteria, such as consistency, lack of bias, correctability, representation, accuracy, and ethicality (Leventhal, 1980; Leventhal et al., 1980). In their seminal work, Thibaut and Walker (1975) conceptualized process fairness as voice, which is whether people were allowed to have input into a decision process (process control) or whether people were allowed to have any say in the actual making of the decision (decision control).

Procedural justice also has been examined in a variety of ways. Whereas in many studies, process fairness (*procedural justice*) has been operationalized on the basis of voice, other researchers implemented procedural justice using one or more of the criteria set forth by Leventhal and colleagues (Leventhal, 1980; Leventhal et al., 1980), such as the procedure of decision-making should (a) be applied consistently across people and across time (consistency), (b) be free from bias (e.g., ensuring that a third party has no vested interest in a particular settlement) (bias suppression), (c) ensure that accurate information is collected and used in making decisions (information truthful and correct), (d) have some mechanism to correct flawed or inaccurate decisions (correctability), (e) conform to personal or prevailing standards of ethics or morality (ethicality), and (f) ensure that the opinions of various groups affected by the

decision have been taken into account (representation).

Greenberg (1990a) pointed out, given research on procedural justice mainly concerns with negative results, such as reaction to inequity, this limits the understanding of organizational justice. Thus, researching into both favorable and unfavorable phenomena in organization will improve our understanding of it.

2.1.1.3 *Interactional Justice*

Bies and colleagues started studying the content of procedures (Bies & Moag, 1986, Bies & Shapiro, 1987), and labeled it as *interactional justice*, which refers to the perceived fairness of the enactment or implementation of procedures (Bies & Moag, 1986). Initial research suggests concern in four main themes: 1) truthfulness, 2) justifications, 3) respect and 4) avoiding prejudices (Byes, 1987). Those elements have been studied in organizational contexts and law settings (Tyler, 1988).

However, there is no agreement at all times on how to classify interactional justice or if treating it as one independent dimension. Some researchers viewed interactional justice as one component of procedural justice (Moorman, Blakely & Niehoff, 1998; Pillai, Schriesheim, & Williams, 1999). More scholars considered interactional justice independent from procedural justice and distributional justice, i.e., a third dimension of justice (Aquino, 1995; Masterson et al., 2000).

More recently, interactional justice has come to be seen as consisting of two specific types of interpersonal treatment (Greenberg, 1990a, 1993a). The first, labeled *interpersonal justice* reflects the degree to which people are treated with politeness, dignity, and respect by authorities or third parties involved in executing procedures or determining outcomes. The second,

labeled *informational justice*, focuses on the explanations provided to people that convey information about why procedures were used in a certain way or why outcomes were distributed in a certain fashion. Thereby, the famous four-factor conceptualization of justice came into being (Cohen-Charash & Spector, 2001; Colquitt, 2001; Colquitt et al., 2001; Greenberg & Colquitt, 2005). Although a few of researchers have applied it (Jones, 2003; Judge & Colquitt, 2004; Kernan & Hanges, 2002; Patient & Skarlicki, 2010), given that the theory of four dimensions of organizational justice is relatively recent, more empirical research needs to be done in various contexts.

2.1.2 Theories and Models of Organizational Justice

American scholar Lawler (1992) ever put forward a model of organizational justice, preliminarily demonstrating the complexity of interpersonal comparisons in forming individual perception of distributive justice. According to the model, people's judgment and perception of justice to the treatment they get in the work depend on the balance between the actual outcomes (O) and the expected outcomes (E). When $O = E$, people will feel being treated with equity, thus perception of justice begins to take shape. When $E > O$, people will feel lost; while $E < O$, people will feel upset because of the considerable gain with small or no merit; thus, guilt comes into being. According to Lawler, goes without saying, people's evaluation on the actual outcomes in their minds is directly associated with the objectively actual amount of outcomes, but people's evaluation more depends on their recognition of the amount of outcomes of the referents. Usually, one will feel unfair if referents with similar conditions gain significantly more. When people weigh gain and loss, they always take into account the factors as follows: (a) the perception of input to their own works including personal characteristics (knowledge, capabilities,

and educational degree) and job characteristics (position or rank, responsibilities undertaken, and task complexity); (b) the recognition of input and outcome of referents. It is obvious that the perception of injustice is influenced greatly by psychological factors, because it almost completely comprises subjective sensation.

Lawler's model paved the way and broadened the scope of mind for subsequent theories. Based on Lawler's research, numerous theories of organizational justice were presented which have been classified into two broad categories: a *content* focus and a *process* focus. Content theories are concerned with why people care about organizational justice, while process theories, on the other hand, attempt to explain how people form perceptions of organizational justice.

2.1.2.1 *Content Approach to Organizational Justice*

The content approach mainly includes the following four theoretic models: *Instrumental Model*, *Relational Model*, *Moral Virtues Model*, and *Multiple Needs Model*.

The Instrumental Model

Historically, the mechanism driving justice effects was thought to be self-interest (Cropanzano, Rupp, Mohler & Schminke, 2001). The instrumental model (Tyler, 1987) assumes that individuals are largely motivated by economic rationality (Barley & Kunda, 1992), and therefore will mostly act in ways that maximize outcomes for themselves (Bazerman, 1998). According to this model, individuals are motivated to seek control. With control individuals might be able to more directly influence the favorability of their outcomes

(Bazerman, 1998; Thibaut & Walker, 1978).

Thibaut and Walker (1975) suggested that individuals tend to look for long term favorability. They are willing to forgo temporarily unfavorable outcomes because fair procedures guarantee more beneficial outcomes in the long run (Greenberg, 1990b; Shapiro, 1993). During the 1970s, a series of classic experiments supported Thibaut and Walker's (1975) position. More recent research suggested that favorable outcomes are more likely to engender fairness, whereas unfavorable outcomes are more likely to engender perceived unfairness (Ambrose, Harland, & Kulik, 1991; Conlon & Ross, 1993; Molm, Collett, & Schaefer, 2006). These effects are stronger when the unfavorable outcome is large rather than small (Lind & Lissak, 1985), and when it is framed as a loss rather than as the absence of a gain (Byrne & Rupp, 2000).

Relational Model

Relational model (Tyler, 1990; Tyler & Lind, 1992) emphasizes salient workers' psychological need for belongingness, thus offers a somewhat different explanation for why people care about justice. This model argues that inclusion within a group can provide a sense of self-worth and identity. Fairly treatment is important because it conveys information about the quality of one's relationships with authorities and group members. In general, the relational model proposes that a procedure is seen as fair if it indicates a positive, full-status relationship with the authority figure, and if it promotes within-group relationships. According to this model, employers are seen as fair when their management practices show neutrality, they are perceived to be trust-worthy, and their behaviors convey that the "perceiving" employee has status providing the rights and respect of group membership (Tyler, 1992).

Moral Virtues Model

Cropanzano, Goldman, and Folger (2003) pointed out that the instrumental model emphasizes economic concerns, and the relational model emphasizes social concerns. Despite this difference, similarities do exist between these two approaches. In an important critique, Folger (1998) argued that both perspectives are driven by self-interest, but each with an emphasis on different types of outcomes. The principal difference between the instrumental and relational models is that the target of self-interest is different in each case. In fact, people care about justice not only for seeking control or a sense of self-worth and self-identity, but also because we (or at least many of us) have a basic respect for human dignity and worth. Moreover, we want to act in accordance with this respect. Consistent with this idea, Folger (1998) reviewed evidence suggesting that people care about justice even when doing so offers no apparent economic benefit and involves strangers.

Multiple Needs Model

Williams (1997) subsumed the three mini-frameworks mentioned above into a general integrative model, i.e., *multiple needs model*. Williams suggested that human beings have at least four interrelated basic psychological needs. He termed these needs as control, belonging, self-regard, and meaningful existence (shown in Figure 2.1). As illustrated in Figure 2.1, Williams' four needs map onto our three models of justice: control (instrumental), belonging (relational), self-regard (relational), and meaningful existence (moral virtues).

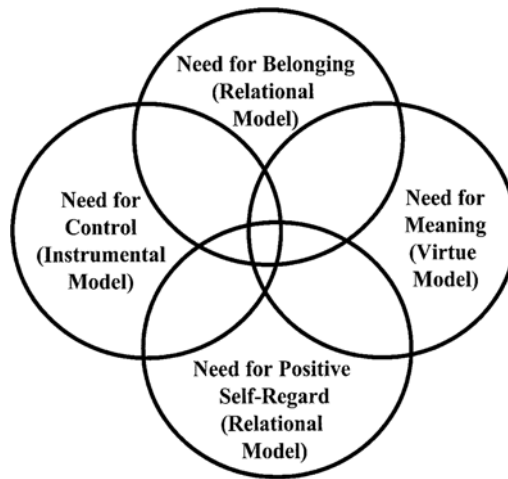


Figure 2.1. The multiple needs model of organizational justice (Williams, 1997).

Evidence suggests that injustice can threaten directly any and all of these four needs (Greenberg, 1993a; Krehbiel & Cropanzano, 2000; Weiss, Suckow & Cropanzano, 1999).

2.1.2.2 *Process Approach of Organizational Justice*

The process approach mainly includes the following three theories: *Classic Equity Theory*, *Referent Cognitions Theory*, and *Fairness Heuristic Theory*.

Classic Equity Theory

Adams' (1965) equity theory proposes that people determine if they have been treated fairly by first examining the ratio of their inputs (e.g., effort, time, cognitive resources) relevant to their outcomes (pay, promotions, opportunities for professional development), and then comparing this ratio to the input-to-outcome ratio of referents. Employees evaluate the extent to which

outcomes are fair based on these types of comparisons.

Although the equity theory has great strengths, such as its face validity, parsimony, generalizability (Greenberg, 1982, 1988), it has been criticized for being too narrow in its explanation of how justice judgments are formed. As pointed out by Folger and Cropanzano (1998), the theory does not consider the effects of procedures on fairness evaluations and does little to outline the determinants of responses to unfair treatment (Folger & Cropanzano, 1998). Lock and Henne (1986) have pointed out that a limitation of equity theory is its lack of usefulness for determining the type of actions that will result from various referent comparisons.

Referent Cognitions Theory

Folger's referent cognitions theory (RCT: Folger, 1986a, 1986b, 1993) is an attempt to explain how results and process factors together influence individual behaviors and responses in limited circumstances. According to RCT, when an individual believes a more favorable outcome *would* have resulted from an alternative procedure that *should* have been used, he or she will feel unfair. Thus, the referent in this theory refers to the awareness of procedural alternatives that would lead to a more favorable outcome. Folger and his colleagues determined that a high referent (i.e., an individual aware that alternative procedures lead to better outcomes) is more likely to engender injustice than a low referent (i.e., an individual not aware of alternative procedures that could result in a better outcome). In addition, the effect occurs even when the objective outcomes are identical (Folger & Martin, 1986).

Although RCT has contributed a great deal to organizational justice research, it is incomplete as an integrative process theory of organizational justice. Folger and Cropanzano (2001) pointed out that the theory defines the

conditions necessary to hold others accountable for unfair treatment, but it does not explain the process by which these accountability judgments are made. Furthermore, similar to equity theory, RCT primarily explores material and economic aspects of referents rather than socioemotional ones.

Fairness Heuristic Theory

Fairness heuristic theory provides a critical piece to the puzzle of how exactly justice evaluations are formed. Fairness heuristic theory argues that individuals are often in situations where they must cede authority, and ceding authority to another person provides an opportunity to be exploited. This situation puts individuals in what Lind (2001b) referred to as the *fundamental social dilemma*. That is, contributing personal resources to a social entity can help facilitate one's goals and secure one's social identity, but it simultaneously puts one at risk of exploitation, rejection, and a loss of identity. As a result of the possibility of being exploited and having one's identity threatened, individuals are often uncertain about their relationships with authority. This uncertainty leads an individual to ask questions such as whether the authority can be trusted, if the authority will treat him or her in a nonbiased manner, and if the authority will view him or her as a legitimate member of the society, organization, or work group.

There is no way we could stop and thoroughly calculate these factors in every social relationship in which we find ourselves. Furthermore, the information we would require to make accurate evaluations regarding these matters is often unavailable or incomplete (Van den Bos, Lind, & Wilk, 2001). Thus, we rely on heuristics or cognitive shortcuts to guide our subsequent behaviors. For instance, we tend to give more weight to information that we receive first, rather than to the information that come later (van den Bos,

Vermunt, & Wilke, 1997).

2.1.3 Measurement of Organizational Justice

A lot of researchers engaged in measuring organizational justice. Since 1990s, there have been quite a few instruments proposed to measure organizational justice. For example, Price and Mueller (1986) developed a six-item Distributive Justice Index (DJI) based on internal judgments of reward fairness relative to education, effort, experience, responsibility, stress, and work quality. They also provided strong evidence for the convergent and discriminant validity of the DJI in relation to job satisfaction and organizational commitment. Five response categories range from “not at all fair” to “very much fair”.

Moorman (1991) proposed an organizational justice evaluation scale consisting of two factors, (a) procedural justice (five items) and (b) relational justice (four items). The first scale measures the extent to which managerial procedures promote consistency, bias suppression, accuracy, correctability, representativeness, and ethicality. It consists of two factors, formal procedures and interactional justice, which are consistent with recent multidimensional models of procedural justice (Greenberg, 1990b; Tyler & Bies, 1990). Items tapping formal procedures are designed to measure the degree to which fair procedures are used in the organizations. These items originated from the rules of procedural justice developed by Leventhal (1980) and Leventhal et al. (1980). Some of the items included in this scale are based on the work of Folger and Konovsky (1989). The latter scale indicates the quality of the supervisor’s interpersonal behavior, the degree of attention the supervisor pays to the employee’s rights, and the extent to which the supervisor deals with the employee in a truthful and trustful manner. The response options for both

scales are from 1 (*totally disagree*) to 5 (*totally agree*).

Niehoff and Moorman (1993) developed a 20-item, 5-point Likert type justice scale with which three dimensions of organizational justice are evaluated, distributive justice (five items), procedural justice (six items), and interactional justice (nine items). Colquitt (2001) carried out a study on the dimensionality of organizational justice. The results suggested that organizational justice was best conceptualized as four distinct dimensions: procedural justice, distributive justice, interpersonal justice, and informational justice. Colquitt (2001) suggested that collapsing procedural and interactional justice together would mask important differences, and interactional justice should be broken down into its interpersonal and informational justice components, as they had differential effects. Colquitt (2001) developed a famous organizational justice questionnaire exploring four domains: procedural justice (seven items), distributive justice (four items), interpersonal justice (four items), and informational justice (five items). Procedural justice denotes justice in the decision-making process, distributive justice denotes justice in effort and rewards, interpersonal justice denotes justice in how superiors treat subordinates, and informational justice denotes justice in subordinates being appropriately informed regarding evaluation by their superiors. Colquitt (2001) suggested that this four-factor model was better than three-factor model.

Based on the concepts of distributive, procedural, and interactional justice (Schminke et al., 2000), Moliner, Martínez-Tur, Peiró, Ramos, and Cropanzano (2004) developed an instrument measuring organizational justice. *Distributive Justice* is measured by using four items that assess the degree to which rewards received by employees were perceived to be related to their performance inputs. Three items measuring *Procedural Justice* assess the structural aspects of the procedures used. *Interactional Justice* is measured by using four items that

assess the quality of the interpersonal treatment received from the supervisor and the adequate explanation of decision procedures. Respondents rated the items on 7-point Likert-type scale, anchored by *strongly disagree* (1) and *strongly agree* (7). Higher scores indicated greater levels of justice perception.

Using a deductive approach (Hinkin, 1998), Ambrose and Schminke (2009) developed a six-item measure consistent with both Lind's (2001a) and Colquitt and Shaw's (2005) suggestions for measuring overall justice, called the Perceived Overall Justice (POJ) scale. The POJ scale consists of three items to assess individuals' personal justice experiences, and includes other three items to assess the fairness of the organization generally. Individuals report their agreement with each POJ statement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses to the items are recoded to parallel the specific justice items, such that higher ratings reflect greater perceptions of fairness.

In China, there also have been some instruments developed for measuring organizational justice. For example, under the background of Chinese culture, through sampling 446 employees in 5 companies in Hubei province, Liu, Long and Li (2003) developed an organizational justice questionnaire also including four dimensions: procedural justice, distributive justice, leadership justice and informational justice.

2.1.4 Antecedents and Consequences of Organizational Justice

2.1.4.1 *Antecedents of Organizational Justice*

Since organizational justice was presented, a great deal of research related to it has emerged. The antecedents and consequences of organizational justice have been hot topics among the researchers all the time. Researchers observed and

analyzed them from different angles. For instance, some scholars studied from the angle of Dispute Settlement Mechanism (DSM) (Colon & Fasolo, 1990; Shapiro & Brett, 1993; Tyler, 1987). Others studied from the angle of organizational circumstances, such as performance appraisal (e.g., Landy, Barnes & Murphy, 1978; Niehoff & Moorman, 1993). Schminke et al. (2000) explored the relationship between organizational structure (centralization, standardization, size) and organizational justice perception, and found that centralization negatively influenced procedural justice perception, while organizational size had a negative effect on interactional justice perception. More researchers found that superior's leadership style was an important factor affecting organizational justice perception. Scandura (1999) found that leader-member exchange (LMX) was a powerful indicator of organizational justice perception. DeCremer (2003) indicated that employees might have had high level of procedural and interactional justice when superior showed consistent leadership behavior, otherwise, employees might perceive low levels of procedural and interactional justice. Ehrhart (2004) explored the relationship between leadership style and organizational citizenship behavior in group, and found that leadership style influenced organizational citizenship behavior in group through procedural justice as a mediator. Pillutla, Farh, and Lee (2007) indicated that group cohesion and individual characteristic together influenced distributive justice perception. The higher group cohesion was, the more likely people inclined towards to equal distribution. However, this influence only appeared among low traditional subjects, for high traditional subjects, they inclined towards to equal distribution, regardless of group cohesion.

Cohen-Church and Spector (2001) introduced a diagram of antecedents and consequences of organizational justice (see Figure 2.2). According to this diagram, antecedents of organizational justice may be classified into three categories: organizational outcomes, organizational practices, and perceiver

characteristics.

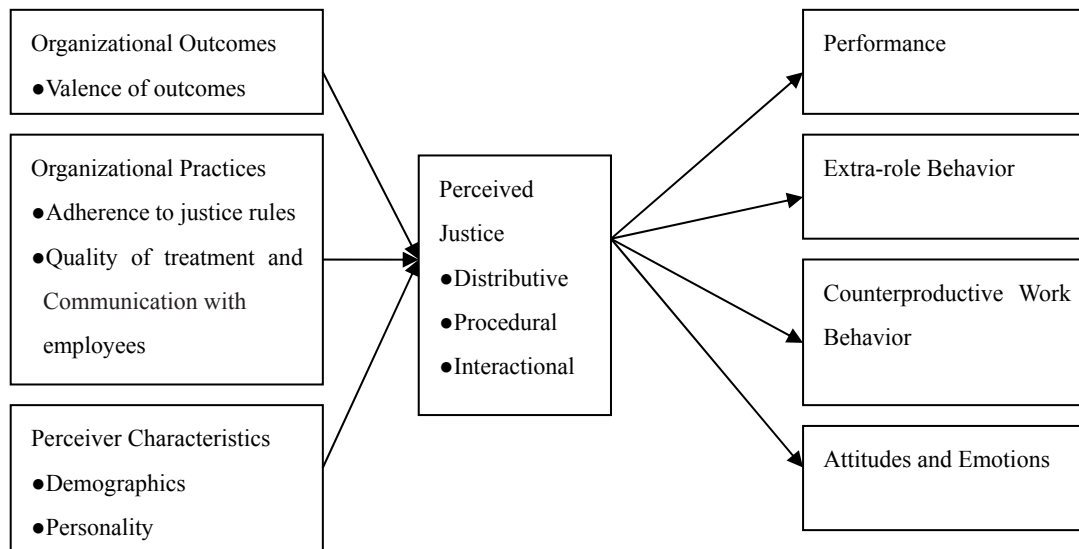


Figure 2.2. Diagram of the antecedents and consequences of organizational justice (Cohen-Church & Specter, 2001).

Just as emphasized by Admas in his equity theory, individual justice perception largely depends on the comparison of outcomes between self and others, now and before, therefore, to a certain extent, organizational justice perceptions are up to the equity of outcomes distribution, i.e., valence of outcomes (Diekmann, Samuels, Ross & Bazerman, 1997; Messick & Sentis, 1979). Organizational practices include the quality of organization's dealing with interpersonal relationships, the communication between organization and employees, and so on. Previous research indicated a lot of variables of organizational outcomes and practices, such as voice, pay rise, communication, organizational support (Yang, & Zhang, 2012). Perceiver characteristics refer to individual gender, age, education, qualifications, personality, and so on.

2.1.4.2 *Consequences of Organizational Justice*

Numerous researchers have been studying the relation between organizational justice and its consequences since 1970s, expecting to test the effects of organizational justice on attitudes and behaviors, and further to increase employees' work initiative through enhancing their organizational justice perception. According to the relevant literature, the consequences of organizational justice most frequently discussed are enumerated as follows:

Performance

A great deal of research has provided considerable support that job performance is one key outcome of organizational justice perception (Cohen-Charash & Spector, 2001; Colquitt, LePine, Piccolo, & Zapata, 2012; Cunha & Rego, 2008; Lam, Schaubroeck, & Aryee, 2002; Miles, Borman, Spector, & Fox, 2002; Rupp & Cropanzano, 2002; Tekleab, Takeuchi, & Taylor, 2005; Wayne, Shore, Bommer, & Tetrick, 2002). Improving justice perception improves productivity and performance (Karriker & Williams, 2009). Job performance is not a unitary construct (Dalal, 2005). Recently, three broad performance categories have been proposed: task performance, citizenship behaviors (OCBs), and counterproductive behaviors (CWBs) (Spector & Fox, 2002). Spector and Fox (2002), in their recent model of job performance, contended that organizational justice is a likely predictor of organizational citizenship behaviors (OCBs) and counterproductive behaviors (CWBs), and substantial empirical support has been found for its direct effects on OCBs (Bakhshi & Kumar, 2009; Colquitt et al., 2001; Dalal, 2005) and CWBs (Dalal, 2005; Miles et al., 2002). Research on OCBs has repeatedly demonstrated stronger linkages between procedural justice and OCBs than

between distributive justice and OCBs (Moorman, 1991). Colquitt and Conlon (2001) found that interpersonal and informational justice were two strong predictors of OCBs, consistent with the agent-system model. Wan and Semarak (2012) reported that interpersonal justice was a stronger predictor of OCBs.

Organizational Commitment

According to Meyer and Allen (1991), organizational commitment includes affective, normative and continuous commitment. A large body of research indicated that organizational commitment was, in part, shaped by perception of just treatment by managers and organizations (Cohen-Charash & Spector; 2001; Fulford, 2005; Lind & Tyler, 1988; Tallman, Phipps, & Matheson, 2009; Zaman, Ali and Ali (2010). For example, Kim (2009) found that when feeling that they were treated fairly by their company, employees were likely to hold more commitment than when they perceived that they were treated unfairly. Fatt et al. (2010) reported that the higher level of employees' perception towards procedural and distributive justice tended to increase the level of their organizational commitment. Lowe and Vodanovich (1995) further found a stronger relationship for distributive justice and organizational commitment than for procedural justice. Other results support the agent-system model, in which procedural justice is a stronger predictor of organizational commitment than is interactional justice (Colquitt et al., 2001; Masterson et al., 2000).

Job Satisfaction

When employees felt that they were treated fairly by their company, they were likely to hold more satisfaction than when they perceived that they were

treated unfairly (Kim, 2009). Job satisfaction was found to be positively associated with overall perceptions of organizational justice such that greater perceived injustice results in lower levels of job satisfaction and greater perceptions of justice result in higher levels of job satisfaction (Najafi et al., 2011; Yaghoubi, Mashinchi, Ahmad, Hadi, & Hamid, 2012). McFarlin and Sweeney (1992) showed that distributive justice was a more powerful predictor of job satisfaction than was procedural justice. However, this does not seem to fit the argument of two-factor theory of organizational justice that procedural justice predicts system-referenced outcomes, whereas distributive justice predicts person-referenced outcomes. Clay-Warner, Reynolds, and Roman (2005) found that procedural justice was a more important predictor of job satisfaction than was distributive justice. Masterson et al. (2000) showed procedural justice to be a stronger predictor of job satisfaction than interactional justice, although both had significant independent effects.

Trust

Trust has recently emerged as a popular topic in organizational research. The relationship between trust and organizational justice is based on reciprocity. Trust in the organization is built from the employee's belief that since current organizational decisions are fair, future organizational decisions will be fair. The continuance of employee trust in the organization and the organization continuing to meet the employee's expectations of fairness creates the reciprocal relationship between trust and organizational justice (DeConick, 2010). A positive relationship between an employee and supervisor can lead to trust in the organization (Karriker & Williams, 2009). Kim (2009) found that when employees felt being treated fairly by their company, they were likely to hold more trust than when they perceived being treated unfairly. Research

found stronger relationship between trust and procedural justice than between trust and distributive justice (Cohen-Charash & Spector, 2001; Hubbell & Chory-Assad, 2005; Konovsky & Pugh, 1994; Kwong & Leung, 2003; Yochi & Spector, 2001). Colquitt et al. (2001) indicated that procedural and distributive justice were even better predictors of trust than were interpersonal or informational justice.

Negative Reactions

Negative reactions largely refer to some behaviors such as theft, inaction, organizational retaliatory behaviors (ORBs), and counterproductive work behaviors (CWBs). Some recent justice research has looked at the relationship between perceived unfairness and a variety of negative reactions, such as employee theft (Greenberg, 1990a, 1993b) and ORBs (Skarlicki & Folger, 1997; Skarlicki, Folger, & Tesluk, 1999). Skarlicki and Folger (1997), for example, found that ORBs had approximately equal correlations with distributive, procedural, and interactional justice, with interactional justice having the strongest unique effect. According to Coyle-Shapiro (2002), injustice may have a stronger negative relationship with ORBs than the positive relationship between justice and OCBs. As for CWBs, the more perceptions of procedural injustice lead employees to perceived normative conflict, the more it is likely that CWBs occur (Zoghbi-Manrique-de-Lara & Verano-Tacoronte, 2007).

Burnout

There is specific evidence relating organizational justice to burnout at the individual level (Cropanzano et al., 2005). As perceptions of justice increase,

burnout decreases (Liljegren & Ekberg, 2009). Brotheridge (2003) observed that perceptions of distributive and procedural justice decreased workers' emotional exhaustion. Lambert et al. (2010) revealed that both distributive justice and procedural justice were negatively related to burnout. Although the dimensions of organizational justice are potentially related to burnout, research generally has supported the predominance of procedural, interactional justice over distributive justice in explaining individual burnout (Moliner et al., 2005; Schminke, Ambrose, & Cropanzano, 2000).

Stress

The work experiences that give rise to stress are often referred to as *stressors* (Hart & Cooper, 2001). Past research has examined several different kinds of stressors. For example, Spector and Jex (1998) described the *interpersonal conflict at work* stressor, which captures the degree to which other people are rude to a given employee. Marshall and Cooper's (1979) model of work stressors included relationships with superiors and a lack of social support, while Kohli (1985) focused on supervisory misbehavior. Each of these stressors seems to be capturing, in part, the interpersonal and informational facets of organizational justice. A review by Mowday and Colwell (2003) provided a summary: "Inequitable treatment causes tension or distress, and people are motivated to do something about it" (p. 68).

Theoretical treatments of different justice dimensions all might invoke stress constructs. For example, referent cognitions theory argues that procedural injustice creates several forms of distress, including resentment, ill will, hostility, and outrage (Folger, 1993).

Although the theoretical grounding for a justice–stress relationship seems sound, there are few tests of this linkage. On the basis of the theoretical

grounding presented previously, Judge and Colquitt (2004) predicted that all four dimensions of organizational justice would be negatively related to stress. But the results of their empirical study showed that procedural and interpersonal justice had significant total effects on stress, while distributive and informational justice did not.

Withdraw

Behaviors and behavioral intentions such as absenteeism, turnover, and neglect are often subsumed under the heading of job withdrawal. The literature linking different justice dimensions to withdrawal is somewhat muddled, with some studies showing that distributive justice influences job withdrawal (Hom, Griffeth, & Sellar, 1984) and other studies revealing effects for procedural justice (Dailey & Kirk, 1992). In a Chinese context, Wang and Yi (2012) reported that both distributive justice and procedural justice had negative relations with work withdrawal behaviors. Masterson et al. (2000) showed that procedural justice had more of an impact on withdrawal than interactional justice. Moreover, Colquitt et al. (2001) found that interpersonal and informational justice were two strong predictors of withdrawal. Cole, Bernerth, Walter, and Hole (2010) examined the relationships between organizational justice and withdrawal outcomes and whether emotional exhaustion was a mediator of these linkages. These authors found that individuals' justice perception negatively predicted their withdrawal reactions. As predicted, emotional exhaustion mediated the linkages between distributive and interpersonal (but not procedural and informational) justice and individuals' withdrawal reactions. Withdrawal is a more extreme outcome stemming from the same equity theory principles.

2.1.5 Organizational Justice among Teachers

Most of the research on organizational justice has been done within industrial-organizational fields (Mueller, Wallace, & Price, 1992), while only a few of them has been conducted within educational settings.

Mueller, Iverson, and Jo (1999) examined the relationship between met expectations about multiple workplace rewards and distributive justice evaluations. Data from samples of teachers in South Korea and the U.S. were used to examine this relationship. As hypothesized for both societies, the more one's expectations about job-related rewards were met, the greater the perceptions of just treatment were. Also as hypothesized, several societal differences based on cultural differences were found. Met expectations about autonomy were more important in explaining justice evaluations in the U.S., whereas met expectations about advancement opportunities were more important in South Korea.

In China, in order to analyze the relation between school's organizational fairness and teachers' organizational citizenship behavior, Wang (2008) investigated 856 teachers from 21 schools in Chongqing in a random way. The results showed that organizational fairness was positively correlated to teachers' organizational citizenship behaviors.

In Turkey, Yilmaz and Tasdan (2009) found that there was a moderate positive relationship between primary school teachers' organizational citizenship behavior and perceptions of organizational justice. Their organizational justice perception varied according to seniority, but not gender and field of study. Yilmaz (2010) found that teachers had positive perception about organizational justice at secondary public schools. Their perception differed according to age, seniority, and the number of students. By examining the effects of teachers' perception of organizational justice and culture on

organizational commitment, Yavuz (2010) found significant correlations between variables of distributive justice, procedural justice and teachers' affective, continuance and normative commitment scores.

2.2 JOB BURNOUT

For more than three decades, job burnout has been a hot topic in the field of organizational behavior and human resource management. Job burnout, also named occupational or professional burnout, or called burnout for short, refers to a state of physical, mental, and emotional exhaustion that stemmed from job stress, attrition, and frustration, and so on (Malachi, 2003). The research on burnout experiences a historical development with several phases.

2.2.1 History of Burnout – Towards a Definition

2.2.1.1 *The Pioneering Phase*

In the first phase, the *Pioneering Phase* (largely from later 1970s to early 1980s), the research on burnout was exploratory and had the goal of articulating the phenomenon of burnout. The initial scientific articles on burnout were written mainly by Herbert Freudenberger (1974, 1975) and Christina Maslach (1976). According to Freudenberger (1974), burnout is a process by which one experiences emotional depletion and a loss of motivation and commitment occurring easily in human services work. When work demands overly for individual energy, capacity and resources, individual may suffer emotional exhaustion and fatigue, thus burnout comes into being. Ever since the initial work of Freudenberger (1974), numerous researchers had started to concern about burnout. However, in this phase, there was not yet universally accepted definition of burnout. Overall, of all the research, besides the definition of burnout by Freudenberger (1974) from clinic approach, several other definitions had relatively wide influence, such as Cherniss (1980) from organization perspective, Sarason (1983) from social-historical approach,

and Maslach from social psychology perspective.

Cherniss (1980) emphasized the effects of organizational factors on job burnout, viewing burnout essentially as a result of mismatch between individual efforts and rewards. According to Cherniss, a situation involving too many or too few stimulations can deteriorate “mismatch”. In addition, one’s impractical expectation of job is liable to induce burnout (Cherniss & Krantz, 1983).

Sarason (1983) researched burnout through social-historical approach in which he examined the conditions conducive to burnout. According to Sarason, burnout is triggered by features of the larger society rather than by individual or organizational factors. The root cause of burnout is the individual striving for realization of self-value in response to socially traditional beliefs, values and historical factors.

From perspective of social psychology, Maslach (1976) interviewed a wide range of human service workers about the emotional stress of their jobs and discovered that the coping strategies had important implications for people’s professional identity and job behavior. Thus, burnout research had its roots in care-giving and service occupations, in which the core of the job was the relationship between provider and recipient. This interpersonal context of the job meant that, from the beginning, burnout was studied not so much as an individual stress response, but in terms of an individual’s relational transactions in the workplace. Moreover, this interpersonal context focused attention on the individual’s emotions, and on the motives and values underlying his or her work with recipients.

The clinical and social psychological perspectives of the initial articles influenced the nature of the first phase of burnout research. On the clinical side, the focus was on symptoms of burnout and on issues of mental health. On the social side, the focus was on the relationship between provider and recipient

and on the situational context of service occupations. Most of this initial research was descriptive and qualitative in nature, utilizing such techniques as interviews, case studies, and on-site observations.

2.2.1.2 *The Empirical Phase*

Along with the world coming into 1980s, the works on burnout shifted to more systematic empirical research. These works were more quantitative in nature, utilizing questionnaires and survey methodology, studying larger subject populations to provide standardized assessments like the Maslach Burnout Inventory (Maslach & Jackson, 1981, 1993; Maslach et al., 1996) and Burnout Measure (Pines & Aronson, 1988; Pines, Aronson, & Kafry, 1981). The scale that has had the strongest psychometric properties and continues to be used most widely by researchers is the Maslach Burnout Inventory (MBI), including three versions: the MBI-Human Services Survey (MBI-HSS), the MBI-Educators Survey (MBI-ES), and the MBI- General Survey (MBI-GS). In this phase, the confusion of conceptual definitions of burnout has been reduced and clarified by the general acceptance of the Maslach Burnout Inventory as the main instrument to assess the burnout syndrome. In both the MBI-HSS, and the MBI-ES, burnout is operationalized as three dimensions. These components are emotional exhaustion, depersonalization, and reduced personal accomplishment, reflecting the focus of the worker's interaction with other people. The MBI-GS assesses the same three dimensions as the MBI-ES and MBI-HSS using slightly revised items, so that it maintains a consistent factor structure across a variety of occupations (Maslach et al., 1996). Because of the more diverse occupational settings, the labels for the three dimensions of the MBI-GS are slightly broader and more generic: exhaustion, cynicism, and reduced professional efficacy.

The shift to greater empiricism was accompanied by theoretical and methodological contributions from the field of industrial-organizational psychology. Burnout was viewed as a form of job stress, with links to such concepts as job satisfaction, organizational commitment, and turnover, and so on. The industrial-organizational approach, when combined with the prior works based in clinical and social psychology, generated a richer diversity of perspectives on burnout and strengthened the scholarly base via the use of standardized tools and research designs.

Since the 1990s this empirical phase continued, but with several new directions. First, the concept of burnout was extended to occupations beyond the human services and education (e.g., clerical, computer technology, military, and managers). Second, burnout research was enhanced by more sophisticated methodology and statistical tools. The complex relationships among organizational factors and the three components of burnout led to the use of meta-analysis and structural equation modeling in much burnout research. Third, a few longitudinal studies began to assess the links between the work environment at one time and the individual's thoughts and feelings at a later time. Longitudinal studies are important for assessing the impact of interventions to alleviate burnout. Fourth, research on intervention on burnout based on work situation and individual personality will be an important hot research topic. In addition, research on intervention under experimental and quasi-experimental situations will be the new research contents.

2.2.2 Theories and Models of Burnout

2.2.3.1 *Job Demands–Resources Model (JD–R Model)*

The job demands–resources model assumes that whereas every occupation

may have its own specific risk factors associated with motivation and job stress, these factors can be classified in two general categories — job demands and job resources — that constitute an overarching model that may be applied to various occupational settings, regardless of the particular demands and resources involved (Bakker & Demerouti, 2007; Bakker, Demerouti, & Euwema, 2005; Demerouti, Bakker, Nachreiner, et al., 2001).

Job demands refer to those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological costs (e.g., exhaustion) and include aspects such as workload, time pressure, and difficult physical environments.

Job resources refer to those aspects of the job that are functional in achieving work goals, stimulate personal growth and development, and reduce job demands and their associated physiological and psychological costs, and include aspects such as job control, opportunities for development, participation in decision making, task variety, feedback, and work social support.

The job demands–resources model assumes two processes that explain the relationship with engagement and burnout (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004).

First, job demands are assumed to activate an energy depletion process whereby an employee's sustained increases in effort to meet perceived job demands are met with an increase in compensatory psychological and physiological costs that drain the employee's energy. The depletion of energy and increased stress from responding to demands gradually lead employees to feel used up and worn out. Thus, job demands are assumed to have a direct positive relationship with burnout.

Second, job resources are assumed to activate a motivational process whereby perceived resources that are instrumental in achieving work goals can

also foster employees' growth, learning, and development; satisfy needs for autonomy and competence; and increase willingness to dedicate one's efforts and abilities to the work task. These perceptions and beliefs increase the degree to which individuals are willing to invest themselves into their role performances. Thus, job resources are assumed to have a direct positive relationship with engagement. Empirical evidence from multiple studies in various occupations and countries confirms that job demands are positively associated with burnout, whereas job resources are positively related to engagement (Bakker & Demerouti, 2007). Evidence from several studies (Bakker, Demerouti, & Euwema, 2005; Bakker, Demerouti, & Schaufeli, 2003; Schaufeli & Bakker, 2004) suggests that job resources have a negative relationship with burnout.

2.2.2.2 *Social Exchange Theory and Equity Theory*

From the perspective of social exchange theory (Homans, 1958, 1961), one potentially powerful work experience deals with perceived inequity in the employment relationship. Social exchange models assume that individuals pursue equity in their exchange with the organization (Hatfield & Sprecher, 1984), and they agree to make specific contributions to an organization (talents, experience, time and effort), and they clearly expect the organization to provide benefits (payment, fringe benefits, promotion prospects, a support climate) proportional to their contributions. Building on this perspective, the notion of psychological contract (Rousseau & Parks, 1993) between employees and employers conveys expectations held by employees about the reciprocal nature of the employment relationship. Expectations concern both concrete and explicit issues (payment, work load), and less tangible or implicit matters (esteem and dignity at work). Inequity, or a violation of the psychological

contract, is experienced when the expectations of reciprocity remain unfulfilled because the costs of the exchange with the organization outweigh the benefits of that one received in return.

As a generic social exchange theory, equity theory (Adams, 1965; Deutsch, 1983; Walster, Walster, & Berscheid, 1978) suggests that the relationship between employees and organization is a kind of social exchange. The levels of motivation of employees depend on the levels of justice between the effort they make and the income they receive. Justice depends on the process of all kinds of social comparison including horizontal comparison and vertical comparison. The former refers to comparison of the inputs and outcomes of a given employee to those of others; the latter refers to comparison of the inputs and outcomes of a given employee presently to those of his/her own previously.

From the perspective of equity theory, if the relationship between the inputs and outcomes is justice, employee is in a state of cognitive balance and will feel satisfactory, thus this helps stimulate the work motivation; otherwise, the loss of perception of justice will lead to the substantial reduction of emotional resources, and finally will develop into burnout.

2.2.2.3 *Stress Theory*

According to Cooper and Palmer (2000), stress is the reaction people have to excessive pressures or other types of demand placed upon them. It arises when they worry that they cannot cope. Work-related stress occurs when there is a mismatch between the demands of the job and the resources and capabilities of the individual worker to meet those demands.

Depending on the vulnerabilities of the individual in question, it may also contribute to a range of medical, psychological and behavioural disorders, all

of which are detrimental not only to physical and mental well-being, but also to job performance, productivity, absence levels and staff turnover (Blaug, Kenyon, & Lekhi, 2007). Constant external stress can lead to internal burnout (Takooshian, 1994). Figure 2.1 described the relationship between the demands of the job and the ability of the individual, clearly showing that oversize stree finally induces burnout (Blaug, Kenyon, & Lekhi, 2007).

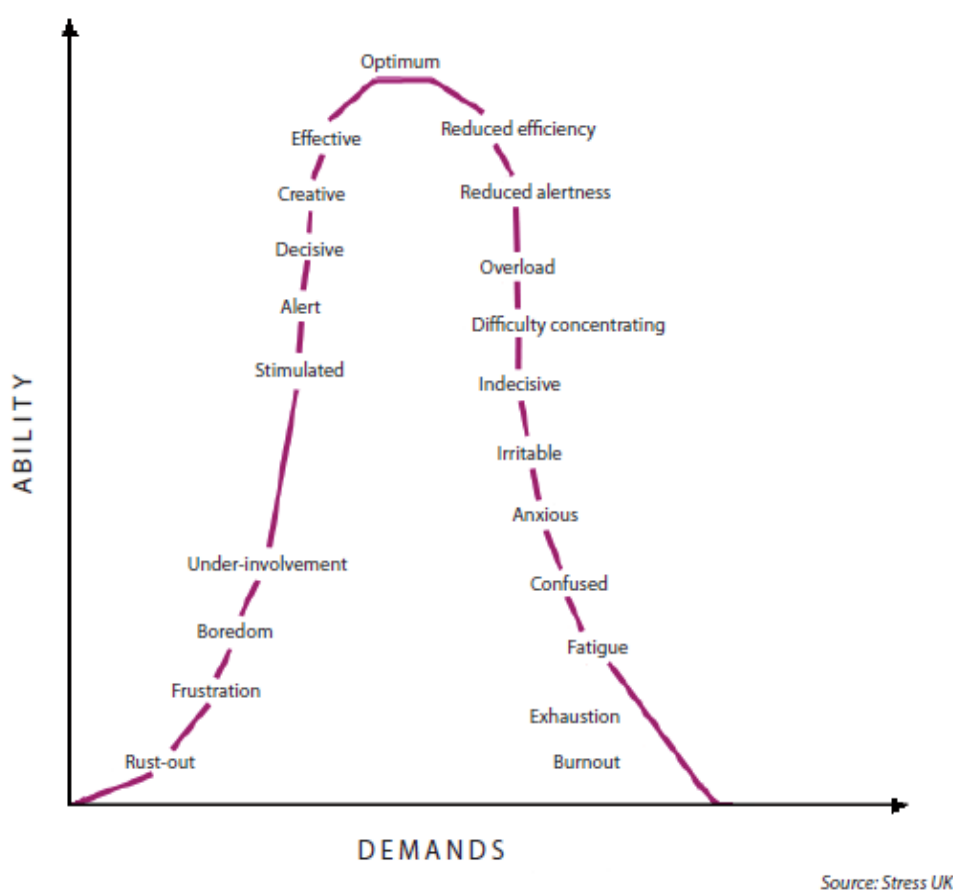


Figure 2.3. The impact of workplace demands on physiological and psychological performance. Adapted from “Stress at work: A report prepared for The Work Foundation’s Principal Partners,” by R. Blaug, A. Kenyon & R. Lekhi, 2007, *The Work Foundation*, p. 21. London: Carlton House Terrace.

2.2.2.4 *Conservation of Resource Theory*

Conservation of resources theory (COR), as a comprehensive theory of stress, provides a framework for understanding the nature of burnout, based on the belief that people have a basic motivation to obtain, retain, build and protect what they value (Hobfoll, 1988, 1989). These things valued can be called resources. According to COR theory, psychological stress occurs when individuals (1) are threatened with resource loss, (2) lose resources, or (3) fail to gain more resources following resource investment. A cycle develops where resources are constantly used and replenished.

In the mid-1990's, scholars began to use COR to understand the process of burnout and stress in organizational settings (Freedy & Hobfoll, 1994; Lee & Ashforth, 1996; Taris, Schreurs, & Van Iersel-Van Silfhout, 2001). According to Hobfoll and Freedy (1993), job demands threaten one's resources, and over time, prolonged exposure to such demands will result in strain in the form of emotional exhaustion, a core dimension of burnout. People will attempt to minimize net resource losses, but in a work setting, the rate at which work demands use up employee resources is typically greater than the rate at which the resources are replenished, and "loss spirals" develop (Freedy & Hobfoll, 1994).

According to COR theory, individuals who lack strong resources are more likely to experience cycles of resource losses. These cycles of resource losses, when not replenished, are likely to result in chronic depletion of energy, namely progressive burnout.

2.2.2.5 *Person–Job Fit Theory*

Maslach and Leiter (1997) have formulated a model that focuses on the degree

of match, or mismatch, between the person and six domains of his or her job environment. The greater the gap, or mismatch, between the person and the job, the more likely burnout comes into being; conversely, the greater the match (or fit), the more likely engagement with work occurs. One new aspect of this approach is that the mismatch focuses on the enduring working relationship people having with their job. Whereas prior models of job–person fit predicted that such fit produces certain outcomes (such as commitment, satisfaction, performance). This new model predicts that burnout is an important mediator of this causal link. In other words, the mismatches lead to burnout, which in turn leads to various outcomes. This model has brought order to the wide variety of situational correlates by proposing six areas of work life that encompass the central relationships with burnout: workload, control, reward, community, fairness, and values. Burnout arises from chronic mismatches between people and their work setting in terms of some or all of these six areas.

2.2.3 Measurement of Burnout

Different researchers use different instruments to examine the structure of burnout. Given the differences of theories, instruments and samples, the results are always inconsistent. The main argument lies in the debate between the two views of burnout structure, i.e., single factor structure view and multi-factor structure view. The present study gives a following review of burnout structure research.

2.2.3.1 *The Maslach Burnout Inventory (MBI)*

The most commonly used instrument for the measurement of burnout is the

Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981, 1986; Maslach et al., 1996). The original MBI was based on the following definition of burnout: “Burnout is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do ‘people work’ of some kind” (Maslach & Jackson, 1993, p.1). The MBI-Human Services Survey (MBI-HSS), the first version of MBI, was based on this three-dimensional conceptualization of burnout including the scales of emotional exhaustion, depersonalization, and (reduced) personal accomplishment. The three-factor structure of the MBI-HSS has been shown to be invariant across occupations and national contexts (Lee & Ashforth, 1996; Schaufeli & Enzmann, 1998). A second version was developed for people working in educational settings (the MBI-Educators Survey, or MBI-ES). In both the HSS and ES forms, the labels for the three dimensions reflected the focus on occupations where workers interacted extensively with other people (clients, patients, students, etc): emotional exhaustion, depersonalization, and reduced personal accomplishment. Given the increasing interest in burnout within occupations that are not so clearly people-oriented, a third, general version of the MBI was developed (the MBI-General Survey, or MBI-GS). Here, the three components of the burnout construct were conceptualized in slightly broader terms, with respect to the job, and not just to the personal relationships that may be a part of that job. Thus, the labels for the three components are: exhaustion, cynicism (a distant attitude toward the job), and reduced professional efficacy. The MBI-GS assesses the same three dimensions as the original measure, using slightly revised items, and maintains a consistent factor structure across a variety of occupations.

Emotional exhaustion refers to feelings of being depleted of one’s emotional resources. This dimension was regarded as the basic individual stress component of the syndrome (Maslach et al., 2001). It is the central

quality of burnout and the most obvious manifestation of this complex syndrome. When people describe themselves or others as experiencing burnout, they are most often referring to the experience of exhaustion. Of the three aspects of burnout, exhaustion is the most widely reported and the most thoroughly analyzed. Depersonalization, refers to negative, cynical, or excessively detached response to other people at work, that is, an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people, representing the interpersonal component of burnout.

Reduced personal accomplishment refers to feelings of decline in one's competence and productivity and to one's sense of lowered self-efficacy, representing the self-evaluation component of burnout (Maslach, 1998, p.69). The relationship of reduced personal accomplishment to the other two aspects of burnout is somewhat more complex. In some instances, it appears to be a function, to some degree, of either exhaustion, cynicism, or a combination of the two (Lee & Ashforth, 1996).

These dimensions are not necessarily interrelated; one would not simply sum up the scores for the individual dimensions on the MBI to generate a burnout total (Maslach et al., 1996). It is entirely possible for an individual to demonstrate signs of burnout in one or two of the dimensions, but not all three.

Early research on burnout structure adopted common least square method regression and exploratory factor analysis. These methods include important sampling error, that is, measuring standard error does not correctly reflect the degree of measuring error. Given structural equation modeling can solve the above problem, researchers have been applying this important method to test the factor structure of MBI since the 1990s (Beckstead, 2002; Schaufeli & Van Dierendonck, 1993; Worley, Vassar, Wheeler, & Barnes, 2008).

2.2.3.2 *Pines' Burnout Measure (MB)*

Another important instrument of burnout is Burnout Measure (MB) originated from Tedium Measure Scale developed by Pines and Kafry. MB is a self-reported instrument, containing 21 items. According to the results of correlation analysis, all factors of BM correlated significantly with those of MBI-GS with correlation coefficients between 0.76 and 0.26 (Pines, Ben, Utasi, & Larson, 2003), indicating the discriminant validity and convergent validity of BM are relatively satisfactory.

Pines and her colleagues defined burnout as the state of physical, emotional, and mental exhaustion caused by long-term involvement in emotionally demanding situations (Pines & Aronson, 1988, p.9). This view did not restrict the application of the term burnout to the helping professions, as was initially the case with the first version of the MBI (Winnubst, 1993). Indeed, it was applied not only to employment relationships (Pines et al., 1981) and organizational careers (Pines & Aronson, 1988), but also to marital relationships (Pines, 1988, 1996) and to the aftermath of political conflicts (Pines, 1993).

Since it was published, BM has been attracting researchers' interests. Presently, except for MBI, it is one of the most widely used instruments of burnout, which has been translated into various kinds of languages and applied to measure burnout under various cultures.

Much like the MBI, the conceptualization of burnout emerged from clinical experiences and case studies. In the process of actually constructing a measure that purported to assess burnout, dubbed the Burnout Measure (MB), Pines and her colleagues viewed burnout as a syndrome of co-occurring symptoms that include helplessness, hopelessness, entrapment, decreased enthusiasm, irritability, and a sense of lowered self-esteem (Pines, 1993). None

of these symptoms is anchored in the context of work or employment relationships. The BM is considered a one-dimensional measure yielding a single-composite burnout score. Evidently, the overlap between the conceptual definition and the operational definition is minimal (Schaufeli & Enzmann, 1998). In addition, the discriminant validity of burnout, as assessed by the BM, relative to depression, anxiety, and self-esteem, is impaired (Shirom & Ezrachi, 2001). This has led researchers to describe the BM as an index of psychological strain that encompasses physical fatigue, emotional exhaustion, depression, anxiety, and reduced self-esteem (Schaufeli & van Dierendonck, 1993).

Pines demonstrated that BM was a one-dimensional burnout instrument and all the items scores could be accumulated together to get a simple total burnout score (Pines & Aronson, 1988). However, simultaneously, she arranged all the items into three types of exhaustion according to her own definition of burnout. Thus, BM seems like a multi-dimensional questionnaire. In terms of the factor structure of BM, sampling 139 social workers, Concoron (1986) found four high correlated factors inconsistent with Pines' demonstration. Because the first factor explains 44 % of total variances; moreover, the internal consistency is very high, Concoron still viewed BM as one dimensional. More recently, Shirom and Ezrachi (2003) also found a four-factor burnout structure of BM. However, by means of confirmatory factor analysis, Schaufeli, Bakker and Hoogduin (2001) found that BM has a three-factor structure. In view of these different findings, it seems that more research needs to be done to confirm the structure of BM.

2.2.3.3 *Oldenburg Burnout Inventory (OLBI)*

Demerouti and his colleagues (Demerouti, Bakker, Nachreiner, & Ebbinghaus,

2002; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Demerouti, Bakker, Vardakou, & Kantas, 2003; Halbesleben & Demerouti, 2005) suggested that the MBI-GS did not overcome one important psychometric shortcoming of the original version of the MBI, namely that the items in each subscale were all framed in the same direction. From a psychometric point of view, such one-sided scales are inferior to scales that include both positively and negatively worded items (Price & Mueller, 1986). In order to overcome psychometric shortcoming of MBI, Demerouti and his colleagues (2003) developed the Oldenburg Burnout Inventory (OLBI), including positively and negatively framed items to assess the two core dimensions of burnout: *exhaustion* and *disengagement* (from work). What mainly distinguishes OLBI from MBI is that OLBI arranges evenly the positively and negatively worded items in the total questionnaire to get a balance, and then conducts reverse scoring to the positively worded items to avoid the subjects' reaction set. At present, as an alternative measure of burnout, OLBI has been paid more and more attention and recognition. The results of some studies clearly showed that a two-factor structure with exhaustion and disengagement as the underlying factors fitted better to the data of several occupational groups than alternative factor structures. However, this is just a start. The validity of OLBI needs more research to test it (Demerouti, Bakker, Vardakou, et al., 2003).

2.2.3.4 Shirom-Melamed Burnout Measure (S-MBM)

Shirom-Melamed Burnout Measure (S-MBM) is an instrument to measure burnout developed by Melamed, Kushnir, and Shirom (1992) based on Hobfoll's (1989, 1998) Conservation of Resources (COR) theory. Shirom (1989) viewed burnout as an affective state characterized by one's feelings of being depleted of one's physical, emotional, and cognitive energies. Burnout

thus represents a combination of physical fatigue, emotional exhaustion, and cognitive weariness. A series of studies that confirmed expected relationships between the S-MBM and physiological variables have lent support to its construct validity (Qiao & Schaufeli, 2011; Shirom, Westman, Shamai, & Carel, 1997). However, the convergent validity of the S-MBM relative to the MBI and the BM has yet to be established, as has its discriminant validity relative to other types of possible emotional reactions to chronic stress at work, like anger, hostility, anxiety, and depressive symptomatology.

2.2.4 Antecedents and Consequences of Job Burnout

2.2.4.1 *Antecedents of Job Burnout*

Through reviewing the research of burnout over the past 30 years, the antecedents of burnout largely can be classified into two groups: individual factors and situational factors.

Individual Factors

Individual factors can be broken down into two sorts of factors: demographic characteristics and personality characteristics.

Demographic Characteristics

Demographic variables include gender, age, years of work, marital status, educational background, etc. Prior research has shown that these variables are linked to burnout. According to Maslach et al. (2001), of all the demographic variables that have been studied, age was the one that has been most

consistently related to burnout. The level of burnout was higher among younger employees than among those over 30 or 40 years old. Age is confounded with work experience, so burnout appears to be more of a risk earlier in one's career (Bakker, Demerouti, & Schaufeli, 2002). These findings should be viewed with caution because of the problem of survival bias, i.e., those who burn out early in their careers are likely to quit their jobs, leaving behind the survivors who consequently exhibit lower levels of burnout. The demographic variable of gender has not been a strong predictor of burnout. Some studies show higher burnout for women (Hogan & McKnight, 2007; Li, 2008), some show higher scores for men (Lackritz, 2004; Xiao, 2007), and others find no overall differences (Chenevey, Ewing & Whittington, 2008). The one small but consistent sex difference is that males often score higher on cynicism (Bakker et al., 2002). These results could be related to gender role stereotypes, but they may also reflect the confounding of sex with occupation. With regard to marital status, those who are unmarried (especially men) seem to be more prone to burnout compared with those who are married. Singles seem to experience even higher burnout levels than those who are divorced. Those with higher levels of education report higher levels of burnout than less educated employees (Bakker et al., 2002; Maslach et al., 2001). It is not clear how to interpret this finding, given that education is confounded with other variables, such as occupation and status.

Personality Characteristics

Several personality traits (e.g., external locus of control and Type-A behavior) have been studied in an attempt to discover which types of people may be at greater risk for experiencing burnout (Bakker, Van der Zee, Ledwig, & Dollard, 2006). People who display low levels of hardiness (involvement in daily

activities, a sense of control over events, and openness to change) have higher burnout scores, particularly on the exhaustion dimension. Burnout is higher among people who have an external locus of control (attributing events and achievements to powerful others or to chance) rather than an internal locus of control (attributions to one's own ability and effort).

Research on the Big Five personality dimensions has found that burnout is linked to the dimensions of neuroticism and extraversion. Neuroticism has regularly predicted emotional exhaustion, depersonalization and reduced personal accomplishment (Bakker et al., 2006; Lakin, Leon, & Miller, 2007). Research has demonstrated a negative relationship between extraversion and emotional exhaustion (Lakin, Leon, & Miller, 2007), depersonalization (Bakker, et al., 2006), and reduced personal accomplishment (Zellars, Hochwarter, Perrewé, Hoffman, & Ford, 2004).

Emotional exhaustion also was found to be linked to Type-A behavior (competition, time pressured lifestyle, hostility, and an excessive need for control) (Hallberg, Johansson, & Schaufeli, 2007). Zellars and Perrewé (2001) examined three factors in personality: neuroticism, extraversion, agreeableness, and suggested that these personality characteristics could influence burnout through their influences on the perception of emotional social support.

Situational Factors

Situational factors can be broken down into two sorts of factors: work characteristics and organizational characteristics.

Work Characteristics

Several work characteristics have been related to burnout (for overviews, see

Schaufeli & Enzmann, 1998; Maslach et al., 2001). In general, findings suggest that job demands are mainly related to the exhaustion component of burnout, and inadequate job resources are more strongly related to the experience of cynicism or distancing from work (Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001).

Demerouti and his colleagues integrated previous fragmentary evidence and developed the JD-R model, to explain the development of burnout (Demerouti, Bakker, De Jonge, et al., 2001; Bakker, Demerouti, De Boer, & Schaufeli, 2003). One central assumption of the JD-R model is that in spite of every occupation may has its own specific work characteristics associated with job burnout, it is still possible to model these characteristics in two broad categories, job demands and resources.

The relationships between job demands and exhaustion, as well as between job resources and disengagement, have been supported by using observers' ratings of job demands and job resources (Bakker, Demerouti, 2007; Demerouti, Bakker, De Jonge, et al., 2001). Studies of qualitative job demands have focused primarily on role conflict and role ambiguity, both of which consistently show a moderate correlation with high burnout (Jawahar, Stone, & Kisamore, 2007).

Organizational Characteristics

Maslach and Leiter (1997) formulated a model of burnout that focuses on the degree of match, or mismatch, between the person and his or her job environment. This model has brought order to the wide variety of situational correlates by proposing six areas of the workplace environment that encompass the central relationships with burnout: workload, control, reward, community, fairness, and values (see reviews by Leiter & Maslach, 2005; Maslach et al.,

2001).

Workload

A commonly discussed source of burnout is overload: job demands exceeding human limits. Increased workload has a consistent relationship with burnout, especially with the exhaustion dimension (Barilan et al., 2011; Maslach et al., 2001). According to Maslach et al. (2001), a mismatch in workload is generally found as excessive overload, through the simple formula that too many demands exhaust an individual's energy to the extent that recovery becomes impossible. A workload mismatch may also result from the wrong kind of work, as when people lack the skills or inclination for a certain type of work, even when it is required in reasonable quantities. Emotional work is especially draining when the job requires people to display emotions inconsistent with their feelings. Generally, workload is most directly related to the emotional exhaustion. Structural models of burnout have shown that exhaustion then mediates the relationship of workload with the other two dimensions of burnout (Demerouti, Bakker, Nachreiner, et al., 2001; Maslach & Leiter, 2008).

Control

According to Maslach et al. (2001), a mismatch in control is generally related to the inefficacy or reduced personal accomplishment. Mismatches in control most often indicate that individuals have insufficient control over the resources needed to do their work or have insufficient authority to pursue the work in what they believe is the most effective manner. The demand–control theory of job stress (Karasek & Theorell, 1990) has identified the importance of personal

control in the workplace. A major control problem occurs when people experience role conflict. Many burnout studies have found a strong relationship between role conflict and the exhaustion dimension of burnout (Jawahar, Stone, & Kisamore, 2007; Maslach et al., 1996; Tunc & Kutanis, 2009). Role ambiguity (the absence of direction in work) is also associated with greater burnout, but not as consistently as that of role conflict; while role conflict directly inhibits a course of action, role ambiguity may enhance some work contexts by providing the freedom to pursue one's values (Jawahar, Stone, & Kisamore, 2007). On the positive side, active participation in organizational decision-making has been consistently found to be associated with higher levels of efficacy and lower levels of exhaustion (Maslach & Leiter, 2008). Additionally, Leiter (2005) found that control over workplace hazards increased employees' energy and health at work.

Reward

According to Maslach et al. (2001), a third type of mismatch involves a lack of appropriate rewards for the work people do. The results of various studies have shown that insufficient reward (whether financial, institutional, or social) increases people's vulnerability to burnout (Hämmig, Brauchli, & Bauer, 2012; Maslanka, 1996). Lack of recognition from service recipients, colleagues, managers, and external stakeholders devalues both the work and the workers and is closely associated with feelings of inefficacy (Maslach et al., 1996).

Community

Community is the overall quality of social interaction at work, including issues of conflict, mutual support, closeness, and the capacity to work as a team. In

the burnout model of Maslach and Leiter (1997), a mismatch occurs when people lose a sense of positive connection with others in the workplace. People thrive in community and function best when they share praise, comfort, happiness, and humor with people they like and respect. Burnout research has focused primarily on social support from supervisors, coworkers, and family members (Cordes & Dougherty, 1993; Maslach et al., 1996). A sense of community has been found to buffer the impact of feelings of inequity at work (Truchot & Deregard, 2001). Regardless of its specific form, social support has been found to be associated with greater engagement (Leiter & Maslach, 1988; Schnorpfeil et al., 2002). Research on the social context of burnout has also attended to the broader issues associated with a sense of community in an organization (Wright, Khetani, & Stephens, 2011).

Fairness

In the burnout model of Maslach and Leiter (1997), a serious mismatch between the person and the job occurs when there is perceived unfairness in the workplace. Fairness communicates respect and confirms people's self-worth. Mutual respect between people is central to a shared sense of community. Unfairness can occur when there is inequity of workload or pay, when there is cheating, or when evaluations and promotions are handled inappropriately. If procedures for grievance or dispute resolution do not allow for both parties to have a voice, then those will be judged as unfair. A lack of fairness deteriorates burnout in at least two ways. First, the experience of unfair treatment is emotionally upsetting and exhausting. Second, unfairness fuels a deep sense of cynicism about the workplace. A growing body of research has reported that fairness or justice is negatively related to burnout (Maslach & Leiter, 2008; Taris et al., 2004).

Values

In the burnout model of Maslach and Leiter (1997), the sixth area of mismatch occurs when there is a conflict between values. The area of values refers to the cognitive-emotional power of job goals and expectations. Values are the ideals and motivations that originally attracted people to their jobs, and thus they are the motivating connection between the worker and the workplace, which goes beyond the utilitarian exchange of time for money or advancement. When there is a values conflict on the job, and thus a gap between individual and organizational values, workers will find themselves making a tradeoff between work they want to do and work they have to do. Research has found that a conflict in values is related to all three dimensions of burnout (Leiter & Harvie, 1997), and a structural model of burnout suggests that values may play a key role in predicting levels of burnout and engagement (Leiter & Maslach, 2005). On the positive side, consistent organizational and personal values on knowledge sharing are associated with greater professional efficacy (Leiter, Day, Harvie, & Shaughnessy, 2007).

2.2.4.2 *Consequences of Job Burnout*

Health

There is no doubt that burnout is a devastating experience for employees, which is a process that begins with excessive and prolonged levels of job stress (Maslach, 1982), leading to a variety of temporary or permanent physiological, psychological and structural changes (Noosorn & Wongwat, 2010). It can lead one to drug and alcohol abuse, and emotional and psychosomatic illnesses, such as depression (Gil-Monte, 2012; Ray, 1991). The various diseases arising

out of it are coronary heart disease, gastric ulcer, psychosexual disease, anxiety neurosis, etc. (Winzelberg et al., 1999). To give a clear portrait of the consequences of the issue, burnout and other stress related costs were estimated around \$60 billion each year in the US (Wallis, 1983 as cited in Cephe, 2010). The exhaustion component of burnout is more predictive of stress-related health outcomes than the other two components. In terms of mental health, burnout has been linked to the personality dimension of neuroticism and the psychiatric profile of job-related neurasthenia (Maslach et al., 2001).

Negative Organizational Outcomes

Burnout has been linked to several negative organizational outcomes, including reduced performance and various forms of job withdrawal—absenteeism, intention to leave the job and actual turnover (Gil-Monte, 2008; Jackson, Schwab, & Schuler, 1986; Kim & Stoner, 2008), and lower organizational commitment (Aslam & Safdar, 2012; Jung & Kim, 2012; Maslach & Leiter, 1997).

A large body of research showed the expected negative relationship between burnout and performance (Abdullah & Fong, 2011; Babakus, Yavas, & Ashill, 2009; Halbesleben & Bowler, 2007; Janssen, Lam, & Huang, 2009; Moon & Hur, 2011). In order to determine the relationship between job burnout and job performance among nurses, Abdullah and Fong (2011) revealed that there were significant correlations between emotional exhaustion and job performance, and between depersonalization and job performance. In South Korea, Moon and Hur (2011) reported that emotional exhaustion was negatively related to job performance.

Several studies (Jackson & Maslach, 1982; Kinman, Wray, & Strange,

2011; Maslach & Jackson, 1985; Tsigilis, Zachopoulou, & Grammatikopoulos, 2006) found that an attitudinal consequence of burnout was a relationship with higher levels of job dissatisfaction. In their meta-analytic study, Lee and Ashforth (1996) found negative correlations between job satisfaction and emotional exhaustion and depersonalization, and a positive correlation between job satisfaction and personal accomplishment.

Based on the review of prior research, Gemlik et al. (2010) suggested that it seemed reasonable to postulate that the experience of burnout would lead employees to be less committed to the organization. Aslam and Safdar (2012) demonstrated that emotional exhaustion and reduced personal accomplishment had significant effects on employees' affective commitment while depersonalization had not.

2.2.5 Job Burnout among Teachers

The issue of burnout is a relatively new field of inquiry in educational research. Many research studies specifically on "Teacher Burnout" have shown that this issue merits attention in terms of research and applications in administrative and educational systems (Cephe, 2010).

Some studies reported significant differences in levels of burnout among teachers relative to demographic factors such as gender, age, marital status, tenure status, academic rank (Jackson, 1993; Kim-wan, 1991). For example, in terms of gender, the universal opinion is that male teachers usually have higher scores of depersonalization than female teachers (Deheus & Diekstra, 1999; Lackritz, 2004; Russell, Altmaier, & VanVelzen, 1987). Regarding emotional exhaustion and personal accomplishment, the effects of gender were reported inconsistently. Anderson and Iwanicki (1984) found that male teachers had higher scores of emotional exhaustion than female teachers, whereas Byrne

(1999) and Johnson (2006) reported that female teachers had higher scores of emotional exhaustion than male teachers. Some other research indicated that there was not significant difference between male and female in emotional exhaustion (Maslach & Jackson, 1993; Russell et al., 1987; Tian & Li, 2006).

In terms of age, Lau, Yuen, and Chan (2005) found that age was the strongest predictor for emotional exhaustion and depersonalization. However, through examining Dutch teachers, Deheus and Diekstra (1999) found the opposite results; whereas Tian and Li (2006) reported that there was no significant difference between teachers with different ages. In personal accomplishment, Maslach and Jackson (1981) reported that the levels of accomplishment among younger teachers were lower than that among elder teachers, whereas Deheus and Diekstra (1999) found the opposite results among Dutch teachers. However, Anderson and Iwanicki (1984), and Schwab and Iwanicki (1982) reported that in personal accomplishment, there was no significant difference between teachers with different ages. On the whole, there is much controversy over the effects of age on teachers' burnout.

Some researchers have found that marital status, teaching subject, teaching grade of students also influence teachers' burnout (Deheus & Diekstra, 1999; Tian & Li, 2006). For example, Russell et al. (1987) found that married female teachers had higher scores of accomplishment than that of unmarried female teachers. Deheus and Diekstra (1999) found that married male teachers had lower scores of emotional exhaustion and depersonalization than that of unmarried male teachers.

In addition, Mabry (2006) found that teachers who felt their salaries were adequate had the lowest level of burnout. Lau et al. (2005) reported that teachers' rank was the best predictor for personal accomplishment.

In order to explore the relationship between personality and burnout, D'Alessandro (2006) examined the relationship between personality and

burnout among teachers from two elementary school districts. Results indicated various significant relationships between personality traits (neuroticism, extraversion, openness, agreeableness, conscientiousness) and three factors of burnout. Similarly, in a study of the relative contribution of personality (Big Five model) in the prediction of burnout dimension among teachers working in special education in Greece, Kokkinos and Davazoglou (2005) cited in Kokkinos (2007) also found that teachers' personality traits were significant predictors of three burnout dimensions. Schaufeli and Enzmann (1998) cited in Kokkinos (2007) reported that neuroticism was one of the strongest personality correlates of burnout especially emotional exhaustion.

Numerous empirical studies report that self-efficacy seriously influences burnout (Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2007). For example, Friedman (2003) found that self-efficacy negatively correlates with job burnout. Li and Yong (2010) indicated that teachers' general teaching efficacy and personal teaching efficacy negatively correlated significantly with emotional exhaustion, depersonalization and reduced personal accomplishment. Evers, Brouwers, and Tomic (2002) found that self-efficacy beliefs were significantly and negatively related to the depersonalization and emotional exhaustion and significantly positively related to personal accomplishment.

Researchers also found that the causal attribution is correlated with burnout. Manasseo et al. (2006), for example, explored the relationship between the dimensions of burnout and causal attribution in a sample of 614 teachers in the Balearic Islands. The results indicated that the dimensions of burnout presented a moderate relationship with the causal dimensions.

Besides of personality variables, the model of teachers' job burnout developed by Maslach and Leiter explicitly shows the effects of social support on teachers' job burnout (Maslach & Leiter, 1997).

Social support is an important resource that enables an individual to cope with stress and prevent burnout (Bonfiglio, 2005; Wong & Cheuk, 2005). Brouwers, Evers, and Tomic (2001) showed that teachers' perceived lack of support from colleagues and principals had a significant effect on their self-efficacy beliefs in eliciting support from them, while these self-efficacy beliefs were shown to predict their levels of burnout.

Gail (2009) investigated the association between burnout and job stressors among high school teachers and found 5 domains that affected teachers' burnout: workload/time incompatibility, pressure on teachers for students to pass high-stakes tests, need for all stakeholders to take responsibility, diminished teacher autonomy, and lack of resources.

In addition, role conflict and role ambiguity have been identified as organizational factors associated with teachers' burnout (Wilkerson & Bellini, 2006). Role conflict and role ambiguity are the two specific occupational stressors that teachers experience with regard to the multiple roles they assume within schools (Bryant & Constantine, 2006). According to Papastyliaou, Kaila, and Polychronopoulos (2009), *emotional exhaustion* was statistically significantly (positive) correlated with the factor *degree of role conflict*; similarly, *degree of role clarity* showed a statistically significant (negative) correlation with the same factor (*emotional exhaustion*). Furthermore, *role ambiguity* contributed significantly to the prediction of *personal accomplishment*, while *role conflict* and *role ambiguity* contributed significantly to the prediction of *depersonalization*.

Tian and Li (2006) explored the relationship between school organizational climate and job burnout. The results suggested that teachers' supportive behavior and restrictive behavior predicted emotional exhaustion, and restrictive behavior did better than supportive one.

2.3 ORGANIZATIONAL COMMITMENT

2.3.1 Conceptualization of Organizational Commitment

As for the organizational commitment, the first era is based on Becker's (1960) conceptualization that defined organizational commitment by using what is known as the side-bet theory. According to Becker (1960), organizational commitment appears to be a structural phenomenon that occurs as a result of individual-organizational transactions and alterations in side-bets over time.

Becker just described the psychological state of commitment among the members in organization, but did not carry out systematic and intensive analysis to this phenomenon. Henceforth, a lot of researchers studied the connotation and extension of organizational commitment, and put forward various speculations concerning this issue. Mowday et al. (1982) summarized some of the definitions that had appeared in the literature. They cited examples of organizational commitment definitions such as, "an attitude or an orientation toward the organization which links or attaches the identity of the person to the organization" (Sheldon, 1971, p. 143), "the willingness of social actors to give their energy and loyalty to social systems" (Kanter, 1968, p. 499).

Although approaches to the definition of organizational commitment vary considerably (Becker, 1960; Kanter, 1968; Sheldon, 1971), certain trends are evident. To rectify and make sense of varying definitions of the same construct, both Staw (1977) and Salancik (1977) distinguished between organizational commitment that is attitudinal in nature and organizational commitment that is behavioral in nature. To them, behavioral commitment describes an employee's commitment to a course of action rather than to an institution; previous experiences form a sense of commitment to an action, and a behavioral attitude that links the employee to his/her organization. So, many of the early

periodical definitions of organizational commitment mainly focus on commitment-related behaviors (Mowday et al., 1979).

Alternatively, researchers interested in the attitudinal aspect of organizational commitment focused their definitions on how and why employees come to identify with their organization's values and to feel a sense of membership in their organization. The attitudinal approach is perhaps best represented by the work of Porter and his colleagues (Mowday et al., 1979; Porter et al., 1974; Porter et al., 1976) who defined organizational commitment as the relative strength of an individual identification with and involvement in a particular organization. This definition pointed out three basic components of organizational commitment: (a) strong belief and acceptance of the organization's goals and values (identification), (b) willingness to exert a considerable amount of effort on behalf of the organization (involvement), and (c) strong desire to remain in the organization (loyalty). According to this definition, they developed an organizational commitment questionnaire to measure organizational commitment.

Though some researchers focus primarily on either attitudinal or behavioral commitment to the organization, others have viewed the relationship between the two as one of reciprocity and have integrated the two concepts. In this integrated approach, feelings of commitment affect behaviors, but those behaviors influence feelings of commitment in turn (Allen & Meyer, 1990; Meyer & Allen, 1991). According to Suliman and Isles (2000), besides the behavioral approach and the attitudinal approach, there is still other approach to define commitment, i.e., the multidimensional approach.

The multidimensional approach is relatively new. It assumes that organizational commitment is more complex than emotional attachment, perceived costs or moral obligation. This approach suggests that organizational commitment develops because of the interaction of all these three components.

The most popular multidimensional approach to organizational commitment is that of Meyer and his colleague (Allen & Meyer, 1990; Meyer & Allen, 1991). Based on the complete analysis and review of the results from the previous research on organizational commitment, especially based on Becker's side-bet theory, through their own empirical studies, Meyer and Allen defined organizational commitment as a psychological state which characterizes the relationship of the employees to the organization and has implications on the employees' decision to remain or continue membership in the organization. Thus, organizational commitment included an attitudinal aspect as well as a behavioral aspect. They further described three distinct forms of commitment:

- *Affective Commitment* reflects the strength of the employees' emotional attachment to, identification with, and involvement in the organization.
- *Continuance Commitment* can be described as the employees' awareness of the cost of leaving the organization.
- *Normative Commitment* refers to the employees' feelings of obligation to remain in the organization.

According to this definition, employees with strong affective commitment remain because they *want to*, those with strong continuance commitment remain because they *have to*, and those with strong normative commitment remain because they feel they *ought to* do so (Meyer & Allen, 1991).

2.3.2 Structural Models of Organizational Commitment

2.3.2.1 Unidimensional Model

The Side-Bet Period

In its earliest stage, organizational commitment was conceptualized as a global

model, i.e., unidimensional in nature, rather than multidimensional. The primal thinking is based on Becker's (1960) conception that defined organizational commitment based on the side-bet theory. According to Becker's theory, the relationship between employees and organization is based on the "contract" of economic exchange behaviors, and committed employees are committed because they have "side-bets" by remaining in a given organization. The term "side-bets" refers to the accumulation of investments valued by the individual. If someone left, the investments of "side-bets" will be claimed hardly. The more one invests his or her time, energy, skill and other personal assets in the organization, the more one has at stake in leaving it. Hence it is natural to expect a greater personal commitment on the part of the individual to an organization as time goes by. Becker (1960) argued that over a period of time certain costs accrue that make it more difficult for the person to disengage from a consistent pattern of activity, namely, maintaining membership in the organization.

Although Baker did not explore the measurement and assessment of organizations commitment, his approach and the scales that were assumed to represent it were adopted by later research as the approach to conceptualize and examine commitment to the organization. For evaluation of Becker's theory, Ritzer and Trice (1969) operated RTS (Ritzer Trice Scale) which can be used in measuring employees' perceived lost. Alutto and Hrebiniak (1973) took some adjustment about it (Hrebiniak Alutto Scale), known as HAS, but unsatisfied of content and discriminant validity. Becker's side-bet theory actually is a unidimensional notion that explains the willingness of employee to the organization. While the side-bet theory was abandoned no longer as a leading commitment theory, the influence of the side-bet approach is evident in Meyer and Allen's Scale (1991), which was named as the continuance commitment. This scale was advanced as a tool for the better testing of the

side-bet approach.

Middle Affective-Dependence Period

Because the scales that were assumed to represent Becker's side-bet theory were criticized as being too simplistic and not really measuring Becker's theory (Meyer & Allen, 1984), researchers suggested other theories for commitment that were based on the idea of psychological attachment. The psychological approach began with a scale, the Organizational Commitment Questionnaire, advanced by Porter and his colleagues (Mowday et al., 1979; Mowday et al., 1982; Porter et al., 1974).

The most widely used global measure is Mowday et al.'s (1979) Organizational Commitment Questionnaire (OCQ). This 15-item self-report survey asks participants the degree to which they agree or disagree with statements that measure their commitment to their organization. The OCQ is considered a measure of attitudinal commitment, which is comparable to what Meyer and Allen (1991) describe as affective commitment (Salanick, 1977). The psychological approach has an entirely different perspective on commitment. Instead of focusing on measuring the perceived costs of leaving the organization, it focuses on the psychological attachment that employees develop to the organization based on an exchange process with the relevant object of commitment. The psychological approach advanced by Porter and his colleagues dominated the research on commitment for about 10 years. However, they still continued with one of the basic assumptions of Becker's theory. Critics have argued that there is an overlap between the items of the OCQ scale and constructs that are considered outcomes of commitment, such as turnover behavior and performance (Cohen, 2003; O'Reilly & Chatman, 1986). For the critiques did convince researchers to be more cautious in the

application of the OCQ, the solution found by these researchers was to use a shorter version of the scale, a 9-item version that omitted the six negatively phrased items (Iverson, 1999) or a 12-item version that omitted the three items supposedly dealing with turnover intentions (Becker & Wilson, 2000).

2.3.2.2 *Two-dimensional Model*

Through factor analysis, Angle and Perry (1981) obtained two factors of organizational commitment named value commitment (support for goals of organization) and retention commitment (intention to stay). Based on analyzing completely the previous studies, Allen and Meyer (1984) put forth a two-dimensional theory of organizational commitment. This two-dimensional model which summarized and generalized the previous research, described two types of commitment: affective and continuance commitment. The affective commitment scale was advanced as a significant improvement over the Porter et al.'s OCQ. It was well defined as a tool for assessing commitment characterized by positive feelings of identification with and involvement in the work organization. Affective commitment described the extent to which an employee *wants* to be a part of an organization. Meyer and Allen proposed the continuance dimension as a better representation of Becker's side-bet approach. It was designed to assess the extent to which an employee feels he/she *has* to remain in the organization by virtue of the costs that they feel being associated with leaving. Based on their theory, Meyer and Allen advanced "affective commitment scale" and "continuance commitment scale".

2.3.2.3 *Three-dimensional Model*

After a empirical study on organizational commitment, based on synthetizing

other researchers' studies, modifying the two-dimensional model, and absorbing the socialist Wiener's ideology regarding normativity, Allen and Meyer (1990) added a third dimension, the normative commitment to their former model, thus, formed the current generally accepted three-dimensional model of organizational commitment, namely affective, normative, and continuance commitment. Normative commitment was defined as a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they *ought* to remain within the organization (Meyer & Allen, 1990). Three-dimensional model of organizational commitment is the most widely used model recently which has been supported by numerous empirical studies. These studies mainly focused on examining the psychometric properties of the scales, particularly their discriminant validity and their relationship with outcomes (Allen & Meyer, 1990; Becker & Wilson, 2000; Ko, Price, & Mueller, 1997).

It is worth mentioning that O'Reilly and Chatman (1986) developed a measure of commitment related, but not identical to Meyer and Allen's (1990) model. Like Meyer and Allen, O'Reilly and Chatman conceptualized organizational commitment as a psychological attachment. However, while Meyer and Allen believed that attachment to one's organization was one component of organizational commitment measured by the affective commitment scale, O'Reilly and Chatman developed a model in which all of the components were related to psychological attachment. They described three dimensions of organizational commitment: internalization, identification, and compliance. Although O'Reilly and Chatman presented an interesting approach to commitment, for its questionable mechanism few researchers have followed this approach. Instead, the approach of Meyer and Allen (1984; 1990) became the dominant one to the study of commitment (Zheng, Sharan, & Wei, 2010).

2.3.2.4 *Four-dimensional Model*

Swalies (2002) extended the concept of organizational commitment to behavior area, dividing it into four types, namely affective, continuance, normative, behavioral commitment. Blau (2001) also elaborated a structure of four-dimensional commitment, considering that continuous commitment should be put into operation in two separated dimensions: the commitment by accumulated costs and that associated to limited occupational alternatives.

2.3.2.5 *Five-dimensional Model*

Considering the difference between China and Western countries in social background and organizational culture, Ling et al. (2000) conducted systemic research on the organizational commitment of employees in Chinese firms. They developed a “Chinese Employees’ Organizational Commitment Inventory” through individual in-depth interview, semi-opened questionnaire and structured questionnaire methods to survey the structure of organizational commitment among employees in Chinese firms. They found that the structural model of organizational commitment contained 5 factors, namely affective commitment, normative commitment, ideal commitment, economic commitment, and opportunity commitment. In addition, they found that the structure of organizational commitment contained affective commitment and normative commitment with the same meanings as those in Meyer and Allen’s model, while the meanings of economic commitment and opportunity commitment were embodied in the continuous commitment of the three-factor model. Ideal commitment was a factor which could not be found in the western model. Since the five-dimension structural model of organizational

commitment was put forth, related research has emerged in multitude in China, and the five-dimension structural model has been confirmed directly or indirectly by much research in China.

2.3.3 Theories of Organizational Commitment

Although there are lots of theories of organizational commitment, due to space limitations, this study only introduces several relatively influential ones as follows:

2.3.3.1 *Social Exchange Theory and Side-Bet Theory*

Literature review on organizational commitment revealed two major theoretical frameworks on which most studies were based. One is Homan's exchange theory (1958) according to which organizational commitment is seen as the outcome of the exchange relationship between the individual and the organization. The theory suggests as the exchange becomes more favorable from the individual's point of view, his or her commitment to the organization increases. Social exchange theorists have alluded to employment as the trade of effort and loyalty for tangible benefits and social rewards (Mowday et al., 1982; Wat & Shaffer, 2005).

The other major theory is Side-Bet theory which suggests that organizational commitment appears to be a structural phenomenon that occurs as a result of individual and organizational transactions and alterations in side bets over time. Side-Bet theory insists, the more one invests his or her time, energy, skill and other personal assets in the organization, the more one has at stake in leaving it. Because of this perceived risk of loss, one has to remain in the organization. Hence it is natural to expect a greater personal commitment

on the part of the individual to an organization as time goes by (Becker, 1960).

2.3.3.2 *Fairness Theory*

Fairness theory (Folger & Cropanzano, 1998, 2001) focus on the cognitions that lead one to appraise an event as either fair or unfair, and the affective reactions that result from these perceptions (Cropanzano, Weiss, Suckow, & Grandey, 2000). Specifically, fairness theory states that individuals evaluate the fairness of an event by working through a series of three counterfactuals (i.e., possible events contrary to the facts), determining whether the outcome “could” have been different, “should” have been different, or “would” have been different (Folger & Cropanzano, 2001). According to fairness theory, positive emotions and attitudes, such as happiness and commitment, should result from this type of positive counterfactual thinking (Cropanzano et al., 2000). Cropanzano, Bowen, and Gilliland (2007) argued that If employees perceive that they are being treated fairly by their supervisor, they will be more likely to reciprocate by holding positive attitudes about their work, their work outcomes and their supervisor (Wat & Shaffer, 2005).

2.3.3.3 *Person-Organization Fit Theory*

The concept of Person-Environment (P-E) fit has long been prevalent in the management literature (Kristof, 1996). Among the various types of P-E fit, researchers have most extensively studied Person-Organization fit (P-O) and Person-Job fit (P-J). P-O fit refers to the compatibility between a person and the organization, emphasizing the extent to which a person and the organization share similar characteristics and/or meet each other’s need. Researchers and practitioners contend that P-O fit is the key to maintaining the

flexible and committed workplace (Bowen, Ledford, & Nathan, 1991; Kristof, 1996). Empirical evidence has shown that a high level of P-O fit is related to a number of positive outcomes. P-O fit was found to be correlated with work attitudes such as job satisfaction and organization commitment (Bretz & Judge, 1994; Pitt, 2009).

2.3.4 Measurement of Organizational Commitment

In order to measure the level of employees' organizational commitment and to analyze the properties of organizational commitment, researchers have created a lot of scales of organizational commitment since the relevant research started. For example, Hrebiniak and Alutto (1972) used a four-item scale which asked in essence what it would take for the employee to leave the organization. These measures tend to concentrate on what Allen and Meyer (1990) had termed affective commitment. There are also plenty of other questionnaires designed to measure other components and concepts of commitment. O'Reilly and Chatman (1986) developed 12-item Psychological Attachment Instrument which described three dimensions of organizational commitment, namely compliance, identification, and internalization.

To date, the two most widely used scales are Mowday et al.'s (1979) organizational commitment questionnaire and Meyer and Allen's organizational commitment scale. Mowday et al. (1979) researched commitment from the attitudinal approach. They claimed organizational commitment was combined with three parts: strong acceptance, participation, and loyalty. The exchange theory was established as the main explanation for the process of commitment (Mowday et al., 1982). Commitment was characterized by 3 related factors: a) a strong belief in and acceptance of the organization's goals and values; b) a willingness to exert considerable effort on

behalf of the organization; c) a strong desire to maintain membership in the organization (Mowday et al., 1979). Based on their definition of organizational commitment, Mowday et al. (1979) developed a 15-item Organizational Commitment Questionnaire (OCQ). 15 items that appeared to tap the three aspects of their definition of organizational commitment reflected the attitudinal notion of commitment, a unidimensional definition of commitment. This instrument's reliability and validity has been well established by prior researchers (Lee & Johnson, 1995; Martin & Hafer, 1995; Mowday et al., 1979). Since the creation of the OCQ, especially before the 1990s, it has become one of the most widely used measurements of commitment (Becker, 1992). But later, critics of the OCQ argued that some of the items of the scale dealt with turnover intentions or with performance intentions and that all of the statements were more reflective of behavioral intentions than attitudes (O'Reilly & Chatman, 1986). The solution found by these researchers was to use a shorter version of the scale, a 9-item version that omitted the six negatively phrased items (Iverson, 1999) or a 12-item version that omitted the three items supposedly dealing with turnover intentions (Becker & Wilson, 2000).

In the early 1990s, Meyer and Allen created the other widely used scale in the field of organizational commitment. Meyer and Allen (1991) went beyond the existing distinction between attitudinal and behavioral commitment and argued that commitment, as a psychological state, was not restricted to value and congruence of organizational goals (i.e., feelings or beliefs or both concerning the employee's relationship to the organization). Commitment could also be a reflection of a desire, a need, or an obligation to maintain membership with the organization. This assertion, then, fell out of the traditional social psychological definition of an attitude (Meyer & Allen, 1991; 1997). A three-component conceptualization was then articulated leading to the

development of the three-component model. Based on their model, they developed the famous three-factor scale of organizational commitment which comprised three subscales measuring respectively: affective, normative, and continuance commitment. The versions of Meyer and Allen's organizational commitment scale modified several times. While the earlier versions (Allen & Meyer, 1990; Meyer & Allen, 1984, 1991) of the OCQ contained 24 items (8 items for each scale), the later versions (Meyer & Allen, 1997; Meyer et al., 1993) only contained 18 items (6 items for each scale).

Since the three-factor scale of organizational commitment was created, it has been used widely and widely because of the good psychometric properties of the current scales, acceptable discriminant validity of the three dimensions, and research findings that showed the usefulness and acceptable content validity of the three-dimensional approach.

However, there is also criticism of the limited predictive validity, conceptual ambiguity of continuance commitment, and concept redundancy between normative and affective commitment.

Price (1997) argued that not all the studies using Meyer and Allen's scale reflected good discriminant validity and convergent validity. Meyer and Allen and their colleagues were aware of some of the problems associated with the three-dimensional scales. Throughout the years, some changes in the scales were proposed and tested. For example, a shorter 6-item version of the three scales was advanced, a revised normative commitment scale was also proposed, and a two-dimensional continuance commitment scale was also suggested (Meyer & Allen, 1997). Subsequently, major revisions in the continuance commitment scale were advanced (Powell & Meyer, 2004).

As aforementioned, in China, researchers have been charring out studies on organizational commitment since the 1990s in the context of Chinese culture. For example, Zhang, Zhang, and Wang (2002) sampled 742 employees of

firms in Xi'an, and examined the applicability of the three-dimension model of organizational commitment created by Meyer and her colleagues. The results indicated that the reliabilities of affective commitment and normative commitment scales were acceptable, but that of continuance commitment scale was relatively lower. The discriminant and convergent validities of all the three dimensions were acceptable.

Chinese researchers have developed some representative organizational commitment measures. Based on substantial empirical research, Ling et al. (2000) for example, advanced a *Chinese Employees' Organizational Commitment Inventory*. The inventory contains 5 factors, namely affective commitment, normative commitment, ideal commitment, economic commitment, and opportunity commitment.

2.3.5 Antecedents and Consequences of Organizational Commitment

2.3.5.1 Antecedents of Organizational Commitment

There are numerous studies on the antecedents of organizational commitment. The earlier most representative research on organizational commitment is the model of antecedents and outcomes of organizational commitment advanced by Steers (1977). According to this model, the antecedents of organizational commitment existed in three categories: personal characteristics (age, opportunities for achievement, education, role tension, and central life interest), job characteristics (job satisfaction, job challenge, opportunities for social interaction, autonomy, variety, identity, and feedback received on the job), and work experiences (group attitudes, organizational dependability and trust, perceptions of personal investment, personal importance to an organization, and rewards or the realization of expectations).

Mowday et al. (1982) argued that the antecedents of organizational commitment could be classified by four analogues: (1) personal characteristics (age, qualifications and experiences, educational degree, gender, race and personality); (2) role-related characteristics (role conflict, role ambiguity, job scope, task autonomy, challenge); (3) structural characteristics (organizational communication, organizational centralization, organizational size, trade union intervention, span of management); (4) work experiences (leadership, job involvement, personal importance, level of expectation, group norm).

Mathieu and Zajac (1990) conducted a meta-analysis to 48 empirical studies on organizational commitment. Based on their study, antecedents of organizational commitment were found in the following categories: personal characteristics (age, sex, education, marital status, organizational tenure, position tenure, perceived personal competence, salary, protestant work ethic, and job level), role states (role conflict, role ambiguity, and role overload), job characteristics (task autonomy and challenge), group-leader relations (group cohesiveness, leader initiating structure, and leader consideration), organizational characteristics (organizational size, organizational centralization). As support for Mathieu and Zajac (1990), Suman and Srivastava (2012) have found that favorably perceived job characteristics and internal locus of control (one of personal characteristics) had significant positive impact on organizational commitment of the executives.

Meyer and Allen (1991) incorporated both the antecedents and outcomes of commitment for each component into their commitment model. In Meyer, Stanley, Herscovitch, and Topolnytsky's (2002) meta-analysis, antecedents were found in the following categories: demographic variables, individual differences, work experiences, and alternatives/investments. Antecedents of affective commitment lie in the categories of personal characteristics and work experiences (Meyer et al., 2002). Within personal characteristics, research has

investigated the relationship between demographic characteristics; for instance, age, sex, education, and tenure, and personal dispositions (Meyer & Allen, 1991). One of the more examined relationships was the commitment-work experience link (Meyer et al., 2002; Meyer, Irving, & Allen, 1998). The literature categorized work experiences into acts that satisfied an employee's need to feel comfortable in the organization as well as those acts that contributed to an employee's feelings of competency in his job performance (Meyer & Allen, 1991). Work experiences were more strongly correlated to affective commitment than were personal characteristics (Meyer et al., 2002).

Antecedents of continuance and normative commitment were based on their definitions. Anything that increased the perceived costs to the member, for example seniority in the organization, would be a predictor of continuance commitment. In addition to alternatives and investments, personal characteristics were also predictors of continuance commitment (Meyer & Allen, 1991; Meyer et al., 2002). According to the model, normative commitment occurred when pressure was placed on a member before or following membership in the organization. Personal characteristics, socialization experiences, and organizational investments were all antecedents of normative commitment (Meyer & Allen, 1991).

Recently, using Meyer and Allen's organizational commitment model, Eisinga, Teelken and Doorewaard (2010) sampled university faculty from six European countries. The results showed procedural justice predicted affective commitment and less strongly normative commitment, but it had no effect on continuance commitment.

2.3.5.2 *Consequences of Organizational Commitment*

The outcomes or consequences of organizational commitment can be divided

into two broad categories: the generally mandatory and in-role behaviors such as task performance, attendance and job maintenance (i.e., remaining versus quitting one's job), and the pro-social and voluntary behaviors an employee may exhibit, i.e., the organizational citizenship behaviors.

In-role outcomes

Previous research supported a negative relationship between organizational commitment and withdrawal behaviors such as turnover (Ahmad et al., 2010; Chughtai & Zafar, 2006; Cohen & Golan, 2007; Cooper-Hakim & Viswesvaran, 2005; Yew, 2011), absenteeism (Khalili & Asmawi, 2012; Schalk, 2011), and counterproductive behaviors (Chughtai & Zafar, 2006; Wright & Kehoe, 2008).

Where comparisons were available between the relative predictive power of commitment and a well developed measure of job satisfaction, commitment was found to be a better and more stable predictor of turnover (Cohen & Golan, 2007).

Research on the power of organizational commitment to predict absenteeism has been less consistent. Randall, Fedor, and Longenecker (1990) found a significant relationship between presence behaviors (absenteeism and tardiness) and organizational commitment when using the global measure, but failed to find significant correlations between presence behaviors and any of Meyer and Allen's (1997) three factors.

Moreover, a number of studies have provided evidence that organizational commitment is a strong positive predictor for job performance (Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989; Pascale & Vicente, 2012; Vandenabeele, 2009). Sampling university faculty from six European countries, Eisinga, Teelken and Doorewaard (2010) found a positive link between job

performance and affective commitment, a negative one for continuance commitment, and no association for normative commitment.

Organizational citizenship behaviors

Organizational Citizenship Behaviors (OCBs) are those activities that an employee chooses to do that go beyond the prescribed roles of the organization (Spector & Fox, 2002). Organizational commitment has consistently been found as one of the most significant determinants of OCBs (Foote, Seipel, Johnson, & Duffy, 2005; Meyer, et al., 2002; Noor, 2009; Riketta, 2002; Sesen & Basim, 2012; Taylor, Bedeian, & Kluemper, 2012).

Committed employees may get involve in performing some extra activities voluntarily and some discretionary behaviors favorable for the organization (Kidwell, Mossholder, & Bennett, 1997). Highly committed employees normally perceive their job duties more extensively, and this is supposed to improve individuals' levels of motivation to demonstrate OCBs (Lee, 2001; Tepper & Taylor, 2003).

In accordance with these argumentation, earlier studies reported that affective commitment positively led to employees' extra-role behaviors whereas continuance commitment had either insignificant or negative relationship with citizenship behaviors (Ghosh, Reio, & Haynes, 2012; Meyer, et al., 2002; Riketta, 2002).

2.3.6 Organizational Commitment among Teachers

Organizational commitment has been found to contribute to teachers' job performance, absenteeism, burnout and turnover, as well as to have an important influence on students' achievement and attitudes toward school

(Firestone, 1996; Louis, 1998).

Shaw and Reyes (1992) suggested that teachers' organizational commitment included three facets as follows: (1) the strong belief in the aims of school; (2) the intention of stay in school; (3) work hard for school beyond individual interests. Teachers' organizational commitment may be enhanced or diminished by factors such as student behavior, collegial and administrative support, parental demands, and national education policies (Bogler & Somech, 2004; Joolideh & Yeshodhara, 2009; Krishnan, 2005; Hulpia, Devos, & Rosseel, 2009; McKinney, Berry, Dickerson, & Gloria, 2007; Ngunl, Slegers, & Denessen, 2006; Orly & Zehava, 2010; Sezgin, 2009; Tracie, 2010; Tsui, Leung, Cheung, & Yilmaz, 2008; Yilmaz, 2008).

Internationally, the research on organizational commitment among teachers has been carried out since the 1980s. The subjects of the research involved educators on all stages and all kinds of education in a lot of countries, such as early childhood educators, primary school teachers, junior high school teachers, high school teachers, college teachers, special educators, and so on.

In terms of college educators, Malik, Nawab, Naeem, and Danish (2010) indicated that the satisfaction with work-itself, quality of supervision and pay satisfaction had significant positive influence on organizational commitment of faculty members. Anari (2012) found that there was a positive significant relationship between emotional intelligence, job satisfaction, and organizational commitment.

Chughtai and Zafar (2006) demonstrated that the personal characteristics, facets of job satisfaction and two dimensions of organizational justice as a group were significantly related to organizational commitment of teachers. Individually, distributive justice and trust in management were found to be the strongest correlates of commitment. Moreover, commitment was found to be negatively related to turnover intentions and positively related to a

self-reported measure of job performance.

Eisinga, Teelken and Doorewaard (2010) examined cross-national invariance of Meyer and Allen's three-component model of organizational commitment using samples of university faculty from six European countries. The analysis revealed while the samples failed to differ in AC and CC, substantial cross-national differences were found for NC. Procedural justice predicted AC and less strongly NC, but it had no effect on CC. A positive link with job performance was found for AC, a negative one for CC, and no association for NC.

In China, the earliest researcher started to carry out studies on teachers' organizational commitment just from the beginning of 21th century (Zheng, 2002). Latterly, more and more researchers began to care for teachers' organizational commitment and its related variables. For example, based on interviews, Wang (2010) conducted a survey among some university teachers in Xi'an. The results showed that the continuance commitment had a negative effect on job performance while affective commitment had a positive effect on job performance.

Presently, the related research adopted self-developed or adapted scales to measure teachers' organizational commitment. Some studies indicated that years of teaching, the degree of education, satisfaction, life stress had significant influences on primary and middle school teachers' organizational commitment (Song & Cai, 2005; Zheng, 2002), while age, years of teaching, degree of education, position rank, and marriage, significantly affected higher school teachers' organizational commitment (Ma, 2006; Wang & Lu, 2007; Zhang, 2006). Under the Chinese cultural background, Chinese researchers are becoming more care for the effect of teachers' organizational commitment on job performance, organizational performance, and OCBs, etc (Lu, 2005; Wang, 2010; Zhang, 2006; Zhang, 2007).



CHAPTER III

METHOD

3.1 RESEARCH DESIGN

The current study is quantitative. As far as research time is concerned, the present study belongs to cross-sectional survey study.

Surveys generally fall into one of two categories, descriptive or relational (Rungtusanatham, Choi, Hollingsworth, & Forza, 2003). Descriptive surveys are designed to provide a snapshot of the current state of affairs while relational surveys are designed to empirically examine relationships among two or more constructs either in an exploratory or in a confirmatory manner. In terms of survey category, the current study belongs to relational survey research. To sum up, according to its theoretical framework, the current study utilized a quantitative method with a cross-sectional survey design that focused on exploring the relationship between several variables. As for variable type, specifically, in the mediation model of job burnout, job burnout was the mediator, and the exogenous variable was organizational justice, while the endogenous variable was organizational commitment.

3.2 PARTICIPANTS AND PROCEDURE

The population for this study is all Chinese university teachers. Given impossibility to reach all teachers within the surveyed universities, the current study used the convenience sampling method to obtain the sample. In this study, a convenience sampling was conducted by requesting someone within a higher school to distribute and collect questionnaires. A self-administered questionnaire was developed by combining three separate instruments. A section on general situation was added for gathering background, personal and organizational information. The questionnaire was paper-and-pencil instrument, which was accompanied by a covering letter explaining the purposes of the study and also including the general instructions on completing the questionnaire and the importance of completing all questions.

In order to facilitate distributing and retrieving questionnaires, this research chose one relatively reliable teacher within each faculty/department of each chosen school as linkman. Since the works such as mobilization and organization must be done by the linkman, it is naturally necessary that before investigation, researcher must communicate well with the linkmen so as to make sure the linkmen understand thoroughly the contents, specific regulations, and some particular notes of the questionnaires in every stage, such as distributing, completing, and reclaiming process. Nevertheless, it is crucial to make sure the linkmen introduce accurately the questionnaires to subjects so that the questionnaires can be completed according to the instructions strictly. Given the possibility of invalid questionnaires, we handed out 500 set of questionnaires, trying to achieve both the rate and the absolute quantity of valid questionnaires as large as possible. When the investigation started, the questionnaires were retrieved within two weeks after distribution, and the whole period of investigation was limited within two months.

The current study selected 6 universities in Henan province to survey. 500 questionnaires were distributed to the respondents. Finally, 435 questionnaires were returned as valid questionnaires. Of all 435 participants, 57.5% were female ($n=250$), 42.5 % were male ($n=185$). Regarding age, 38.2 % were less than 30 years old ($n=166$), 45.1% were between 30 and 40 years old ($n=196$), and 16.7 % were more than 40 years old ($n=73$).

3.3 INSTRUMENTS

A four-part questionnaire was used to collect data in this study. Part I contained a general situation survey including demographic variables and academic performance variables of interest. Part II contained the Maslach and Jackson's (1993) Maslach Burnout Inventory-Educators Survey Version (MBI-ES). Part III contained the Colquitt's (2001) Organizational Justice Questionnaire (OJQ). Part IV contained the Meyer & Allen's (1997) Organizational Commitment Questionnaire (OCQ).

Part I: General Situation Survey

The general situation survey requested information related to personal and professional demographic characteristics and academic performance. The variables were chosen not only based on previous research that tied them to organizational justice, burnout, and organizational commitment (Ma, 2009; Lee, 2000), but also according to the interested focus of the current study. The participants were asked to respond to self-descriptors: age, gender, educational level, length of teaching service, marital status, academic rank, situation of promotion during the last three years, the amount of academic papers published internationally during the last three years, the amount of academic papers published in domestic core journals during the last three years, the amount of academic papers published in domestic general journals during the last three years, the amount of academic books published during the last three years, national research projects presided or participated during the last three years, and local research projects presided or participated during the last three years.

Part II: Organizational Justice Questionnaire (OJQ)

Colquitt (2001) carried out a study on the dimensionality of organizational justice. The results suggested that organizational justice was best conceptualized as four distinct dimensions: procedural justice, distributive justice, interpersonal justice, and informational justice. Although many researchers have debated whether interactional justice should be considered a subset of procedural justice (Tyler & Bies, 1990), Colquitt (2001) suggested that collapsing procedural justice and interactional justice together would mask important differences, and interactional justice should be broken down into its interpersonal and informational justice components, as they had too much different effects. Colquitt (2001) developed a famous self-reported organizational justice questionnaire exploring four domains: procedural justice (seven items, coefficient $\alpha = .93$), distributive justice (four items, coefficient $\alpha = .93$), interpersonal justice (four items, coefficient $\alpha = .92$), and informational justice (five items, coefficient $\alpha = .90$). Procedural justice denotes justice in the decision-making process, distributive justice denotes justice in effort and rewards, interpersonal justice denotes justice in how superiors treat subordinates, and informational justice denotes justice in subordinates being appropriately informed regarding evaluation by their superiors. An example item from procedural justice measure is “Have those procedures been free of bias?”, from distributive justice measure is “Is your (outcome) justified, given your performance?”, from interpersonal justice measure is “Has he/she treated you with dignity?” and from informational justice measure is “Has he/she explained the procedures thoroughly?”. Response options are delivered on a Likert scale with possible responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating a higher level of perceived

organizational justice.

In China, applying a Chinese version of Colquitt (2001) OJQ, Jiang (2008) examined the relationship between organizational justice, organizational commitment and turnover intention among employees in Offshore Oil Platform Manufacturing Industry of China. The results of exploratory factor analyses showed that the organizational justice consisted of four dimensions: procedural justice ($\alpha = .82$), distributive justice ($\alpha = .90$), interpersonal justice ($\alpha = .89$) and informational justice ($\alpha = .91$), indicating the cross-cultural applicability of the Colquitt (2001) OJQ. The results also showed that affective commitment and continuance commitment were two full mediators between procedural justice and turnover intention; while between distributive justice and turnover intention, affective commitment and continuance commitment were two partial mediators.

Several previous studies have suggested that this four-factor form of the questionnaire was better than one-, two-, or three-factor models (Colquitt, 2001; Shibaoka, Takada, & Watanabe, et al., 2010). Following Jiang (2008), the current study adopted the Chinese version of Colquitt (2001) to measure organizational justice.

Part III: Maslach Burnout Inventory — Educators Survey Version (MBI-ES)

The *Maslach Burnout Inventory (MBI) Second Edition — Educators Survey Version* (Maslach & Jackson, 1993) was adopted for the current survey. Given the subjects of the current study are teachers, in spite of the existence of MBI-Human Services Survey (MBI-HSS) and the MBI-General Survey (MBI-GS), the MBI-Educators Survey (MBI-ES) is obviously the most suitable to the current study. The MBI-ES is a 22-item, self-administered scale

designed to assess different aspects of perceived burnout, consisting of three subscales: emotional exhaustion (EE), depersonalization (DP) and (reduced) personal accomplishment (PA). The subscale scores may be interpreted as indicating one of three levels of burnout. Each subscale is considered individually; scores are not combined into a total score. Subscale scores may be compared to normative data. Statements are rated on frequency of occurrence of feelings or attitude from 0 (never) to 6 (every day). The scales assess frequency of feelings or attitudes in relation to various aspects of a person's work. Higher subscale scores indicate higher levels of emotional exhaustion, depersonalization, and personal accomplishment. *Emotional exhaustion* is measured by a nine-item scale. Typical items are "I feel emotionally drained from my job" and "I feel used up at the end of a work day" (0 = *never*, 6 = *everyday*). According to Maslach and Jackson (1993), the internal consistency (Cronbach's alpha) for *emotional exhaustion* was .89. *Depersonalization* is tapped by a five-item scale. Typical items are "I worry that this job is hardening me emotionally," "I don't really care what happens to some students," and "I feel that I treat some students indifferently" (0 = *never*, 6 = *everyday*). The internal consistency of this scale (Cronbach's alpha) was .66. Finally, *personal accomplishment* is measured by a eight-item scale ($\alpha = .81$). Typical items are "I feel I am positively influencing other people's lives through my work" and "I know how to deal with my students' problems effectively." The three-factor model has been supported by confirmatory factor analysis (Lee & Ashforth, 1996).

In China, Li (2005) adopted a Chinese version of MBI-ES to survey the state and the influencing factors of burnout among high school politics teachers. The study supported the three-factor structure of the MBI-ES, and reliability coefficients using Chronbach's Alpha estimates for the sample

were .83 for EE, .57 for DP, .88 for PA, indicating that the scales have good applicability cross-culturally. Following Li (2005), the current study adopted the Chinese version of MBI-ES to measure job burnout.

Part IV : Meyer & Allen's (1997) Organizational Commitment Questionnaire (OCQ)

The Organizational Commitment Questionnaire (OCQ) (Meyer & Allen, 1997) is a self-reported questionnaire. Responses to each of the 6 items are rated using a 5-point Likert scale with anchors labeled: 0 = strongly disagree, 1 = disagree, 2 = neither agree nor disagree, 3 = agree, 4 = strongly agree. The six items measuring affective commitment include statements such as, "I would be very happy to spend the rest of my career in this organization" ($\alpha = .85$). Six items measure normative commitment including, "this organization deserves my loyalty" ($\alpha = .88$). The six items measure continuance commitment including, "it would be very hard for me to leave my organization right now, even if I wanted to" ($\alpha = .85$) (Meyer & Allen, 1997).

Wang (2008) adapted a Chinese version of Meyer and Allen (1997) OCQ to examine the mediation of organizational commitment between organizational justice and job performance. The results of exploratory factor analyses supported the three-factor OC model of Meyer and Allen (1997), also in line with the results of Chen and Francesco (2003), indicating that the scale was applicable cross-culturally. In the study, reliability coefficients using Chronbach's alpha estimates for the sample are .84 for *affective commitment*, .80 for *normative commitment*, and .78 for *continuance commitment*. Following Wang (2008), the current study adopted the Chinese version of Meyer and Allen (1997) OCQ to measure organizational commitment.

It's worth pointing out that when applying questionnaires, we generally face with two problems. First, whether it is necessary to develop a new scale or just to translate and adapt the foreign questionnaire already applied is sufficient. Second, the questionnaire we intend to develop whether should reflect the particularity within Chinese environment or should seek to get the generally cross-cultural applicability. Farh, Connella, and Lee (2006) summarized the four common approaches of questionnaire development within Chinese environment as follows: translation approach, adaptation approach, de-contextualization approach, contextualization approach. The first approach highlights the cross-cultural applicability, translating the foreign questionnaire directly into Chinese. The second approach emphasizes adapting the parts unsuited to Chinese environment in the process of translating foreign questionnaire in order to make it correspond with Chinese cultural background. The latter two approaches emphasize developing new questionnaire within Chinese environment. In the current research, in view of the actual situation that the previous research had provided questionnaires which were foreign, but had been translated directly into Chinese, and their acceptable reliability and validity had been tested. Therefore, this current research adopted the translation approach, and directly applied these "translated into Chinese" foreign questionnaires which had been validated with samples in China.

3.4 PILOT STUDY OF THE SURVEY INSTRUMENTS

3.4.1 Objectives of Pilot Survey

As previously mentioned, the questionnaires adopted in the current research were all developed by foreigners and in foreign countries. Indeed, all three given instruments are relatively mature questionnaires with high reliability and validity within their original birthplaces. However, because the current research carries out in China, not in western countries, that is, the application environment has changed. Although these three given instruments have also been applied to Chinese subjects in previous research, taking account of the applicability of the instruments to the subjects participating in the current study, it is necessary to retest further their reliabilities and validities.

The main objectives of pilot survey were to test preliminarily the factor structures, reliabilities and validities of the questionnaires.

3.4.2 Method of Pilot Survey

With random sampling, 110 teachers from Pingdingshan University were sampled to respond to the instruments in the section 1.6. 100 questionnaires were returned, with a valid return rate of 91%. The specific information of the 100-teacher valid sample is described in Table 3.1.

With the data from the 100 subjects, this pilot survey analyzed the reliability of questionnaires following closely suggestions by Churchill (1979) that the corrected item total correlation (CITC) should not be smaller than 0.50, or else, the item should be deleted, and by Peterson (1994) that Cronbach's alpha should not be smaller than 0.70. Next, the construct validities of measures were tested by means of exploratory factor analyses (EFA).

Table 3.1.Demographic characteristics of pilot study ($N=100$)

Characteristics	Frequency	%
<i>Gender</i>		
Male	43	43.0
<i>Age</i>		
≤30 years old	37	37.0
31-40 years old	47	47.0
41-50 years old	15	15.0
≥51 years old	1	1.0
<i>Education</i>		
Bachelor	20	20.0
Master	55	55.0
Doctor	25	25.0
<i>Length of Teaching Service</i>		
≤2 years	19	19
3-5 years	40	40
6-10 years	28	28
11-15 years	5	5
≥16 years	7	7
<i>Marital status</i>		
Unmarried	29	29.0
Married	71	71.0
<i>Academic Rank</i>		
Assistant	28	28.0
Instructor	50	50.0
Vice professor or Professor	22	22.0

Table 3.1. (continued)

Characteristics	Frequency	%
<i>Monthly Income</i>		
≤4000 CNY	71	71.0
4000-6000 CNY	23	23.0
≥6000 CNY	6	6.0
<i>Situation of Promotion^a</i>		
by a wide margin	13	13.0
By a little margin	40	40.0
No	47	47.0

Note. ^a Situation of promotion during the last three years.

3.4.3 Testing Results of Pilot Survey

3.4.3.1 *Analyses of Reliability*

As described above, organizational justice was measured using Colquitt (2001) *Organizational Justice Questionnaire* (OJQ), job burnout was measured using the *Maslach Burnout Inventory Second Edition — Educators Survey Version* (MBI-ES) (Maslach & Jackson, 1993), and organizational commitment was measured using Meyer and Allen's (1997) *organizational commitment Questionnaire* (OCQ). To ascertain whether the previously reported internal consistency reliability estimates were met, Cronbach's alpha was calculated for the scales and was found to exceed the minimum cutoff point of .70 suggested by Nunnally (1978). The Chronbach's Alpha for the OJQ items was found to be .93. The four subscales that constitute the OJQ were found to have internal consistency reliability estimates ranging from .87 to .91. The Chronbach's Alpha for MBI-ES was found to be .72. The three subscales that constitute the MBI-ES were found to have internal consistency reliability estimates ranging from .88 to .92. The Chronbach's alpha for the OCQ items was found to be .82. The three subscales that constitute the OCQ were found to have internal consistency reliability estimates ranging from .86 to .90. Thus each scale has high reliability. Table 3.2 reports the Cronbach's alphas that were found for the instruments used in the current study.

Table 3.2.Survey instrument reliability estimates ($N=100$)

Survey Instrument	Cronbach's Alpha
Organizational Justice	0.93
Procedural Justice	0.91
Distribute Justice	0.88
Interpersonal Justice	0.89
Informational Justice	0.87
Job burnout	0.72
Emotional Exhaustion	0.92
Personal Accomplishment	0.88
Depersonalization	0.92
Organizational Commitment	0.82
Affective Commitment	0.90
Continuance Commitment	0.86
Normative Commitment	0.89

3.4.3.2 *Analyses of Validity*

In order to test the construct validity of questionnaire, the current research conducted a KOM test and Bartlett's test of sphericity before the exploratory factor analyses. Kaiser (1974) suggested that whether or not the data are appropriate for factor analyze can be judged by the value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO). According to Kaiser (1974), a value close to 1 indicates that patterns of correlations are relatively compact and so factor analyses should yield distinct and reliable factors. Kaiser (1974) recommended that values greater than 0.50 are

acceptable. Furthermore, values between 0.50 and 0.70 are mediocre, values between 0.70 and 0.80 are good, values between 0.80 and 0.90 are great and values above 0.9 are superb. From Table 3.3 we can see, for the current data, the KMO values were between 0.87 and 0.92, which all fell into the range of being great or superb. So factor analyses should be appropriate for the data. Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix. For factor analyses to work we need some relationships between variables and if the *R*-matrix were an identity matrix then all correlation coefficients would be zero. Therefore, we want this test be significant. For these data, the values of χ^2 were between 1098.05 and 1460.15, and Bartlett's tests were all highly significant. Thus it is appropriate to conduct factor analyses.

Table 3.3.

KMO and Bartlett's test ($N=100$)

Label	KOM sample measure	Bartlett's test of sphericity		
		χ^2 value	<i>df</i>	Significant level
Organizational Justice	0.88	1415.27	190	0.000
Job Burnout	0.92	1460.15	231	0.000
Organizational Commitment	0.87	1098.05	153	0.000

This current research adopted principal component analysis and varimax to do the exploratory factor analysis (EFA). Table 3.4 showed the results of EFA for OJQ. Table 3.5 showed those for MBI. Table 3.6 showed those for OCQ. The results of EFA were just in line with the three dimensions of the MBI-ES and the three dimensions of the OCQ, indicating that the construct

validities of these two scales are good. However, for Colquitt's (2001) *Organizational Justice Questionnaire* (OJQ), the results were not consistent with the four dimensions confirmed by Colquitt (2001). In the current study, the items J12, J13, J14, and J15 did not load highly onto the third factor, meanwhile, the items J16, J17, J18, J19, and J20 did not yet load highly onto the fourth factor. The reality was that these 9 items loaded together highly onto the first factor. For the items J1, J2, J3, J4, J5, J6, and J7, they did not load together highly onto the first factor, but onto the second factor. For the items J8, J9, J10, and J11, these four did not load together highly onto the second factor, but onto the third factor. The divergence about OC's dimensions between the current study and Colquitt (2001) was discussed in Chapter IV.

Table 3.4.Three-factor rotated structure of OJQ ($N=100$)

Item	component			Extraction
	1	2	3	
J1		.792		.703
J2		.684		.521
J3		.667		.620
J4		.810		.705
J5		.779		.721
J6		.784		.677
J7		.700		.619
J8			.728	.655
J9			.871	.806
J10			.861	.770
J11			.810	.737
J12	.671			.539
J13	.546			.580
J14	.803			.770
J15	.763			.727
J16	.826			.728
J17	.712			.547
J18	.745			.597
J19	.764			.681
J20	.684			.546
Total variance explained	27.08%	23.48%	15.67%	
Cumulative variance explained	27.08%	50.56%	66.24%	

Note. Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations. Similarly hereinafter.

Table 3.5.Three-factor rotated structure of MBI ($N=100$)

Item	component			Extraction
	1	2	3	
B1	.694			.576
B2	.676			.569
B3	.703			.597
B4	.566			.561
B5	.553			.577
B6	.548			.606
B7	.620			.589
B8	.629			.608
B9	.733			.773
B10		.577		.531
B11		.657		.506
B12		.671		.611
B13		.725		.599
B14		.661		.556
B15		.606		.601
B16		.652		.571
B17		.725		.574
B18			.696	.718
B19			.843	.869
B20			.651	.673
B21			.783	.748
B22			.714	.709
Total variance explained	22.84%	19.91%	19.61%	
Cumulative variance explained	22.84%	42.74%	62.36%	

Table 3.6.Three-factor rotated structure of OCQ ($N=100$)

Item	component			Extraction
	1	2	3	
C1	.650			.563
C2	.812			.748
C3	.777			.667
C4	.775			.674
C5	.825			.776
C6	.694			.651
C7		.733		.552
C8		.755		.589
C9		.724		.566
C10		.800		.653
C11		.794		.645
C12		.755		.595
C13			.660	.518
C14			.821	.724
C15			.785	.777
C16			.711	.747
C17			.744	.700
C18			.576	.559
Total variance explained	23.44%	20.82%	20.76%	
Cumulative variance explained	23.44%	44.26%	65.02%	

According to the above tests and analyses, the three instruments had relatively ideal reliabilities and validities when they were applied to the current subjects. Thus the scales remained without any change for the formal survey.

Given that all variables were measured from a single source, i.e., self report, there is a chance of common method variance or bias to affect the results. This kind of variance is attributed to the measurement method rather than the constructs of interest, may further bias the estimates of the true relationship among theoretical constructs. Therefore, common method variance can either inflate or deflate observed relationships between constructs, thus leading to both Type I and Type II errors (Chan, 2009; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 2006). In order to determine if the common method variance was a concern in the present study, Harman's single factor test was applied (Camelo Ordaz, Garcia Cruz, & Sousa Ginel, 2010; Simonin, 2004). All the 9 variables were entered into an exploratory factor analysis, using principal component analysis with varimax rotation to determine the number of factors that are necessary to account for the variance in the variables. If a substantial amount of common method variance is present, either (a) a single factor will emerge from the factor analysis, or (b) one general factor will account for the majority of the covariance among the variables (Krishnan, Martin, & Noorderhaven, 2006; Podsakoff et al., 2003). In the current study, the principal component analysis with varimax rotation revealed the presence of three distinct factors with eigenvalue greater than 1.0, rather than a single factor. The three factors together accounted for 64% of the total variance; while the first (largest) factor account for 26%, not for a majority of the variance. Thus, no one general factor was apparent. While the results of these analyses do not preclude the possibility of common method variance, they do suggest that common method variance is not of great concern and thus is unlikely to confound the interpretations of results.

3.5 PROCEDURE FOR DATA ANALYSIS

3.5.1 Dealing With Missing Data

The returned questionnaires were coded and raw data entered into a processing program. Generally, as the data is collected through a self-response questionnaire, it is not possible for the researcher to ensure that the respondents answered all the survey items. There always are a few questionnaires with some unanswered items. Items that have not been answered constitute missing data.

The literature provides several guidelines in dealing with missing data (Allison, 2009; Arbuckle, 2007). Among older methods for missing data, the most popular standard method is *Listwise Deletion* (LD). In spite of its simplicity and some attractive statistical properties, however, *Listwise Deletion* is unsatisfactory because it requires discarding the information contained in the responses that the person did give because of the responses that he did not give. Many alternative methods have been proposed, for example, *Pairwise Deletion* and *Single Imputation*. However, these conventional methods for handling missing data are obviously flawed, even under the best of conditions, typically yielding biased parameter estimates, biased standard error estimates or both. Fortunately, better methods are available, such as Maximum likelihood method (ML) and Multiple Imputation method (MI), which software *AMOS* can use just as well. The ML is based on maximizing the likelihood function or the probability of obtaining a particular set of data given the chosen probability model. ML provides unbiased and efficient parameter estimates for large data sets. Another advantage is that the ML generates theoretically more accurate confidence bounds for parameter estimates (Masoro & Austad, 2006). In theory, likelihood methods are more attractive than ad hoc techniques of case

deletion and single imputation. However, they still rest on a few crucial assumptions. One of the assumptions is that the sample is large enough for the ML estimate to be approximately unbiased and normally distributed. Another assumption is that the data are MAR (*Missing at random*).

Multiple Imputation method (MI), proposed by Rubin (1987), as a relative newcomer, relies on Bayesian arguments. Its performance is similar to that of a likelihood method. Like ML, MI also relies on large-sample approximations, and also requires assumptions about the distribution of missingness. Nearly all MI analyses have assumed that the missing data are MAR (*Missing At Random*). MI retains much of the attractiveness of single imputation from a conditional distribution but solves the problem of understating uncertainty. However, one notable inconvenience of MI is that it produces different results every time you use it (Schafer & Graham, 2002).

Software *AMOS* 19.0 provides three methods of data imputation: *Regression Imputation*, *Stochastic Regression Imputation*, and *Bayesian Imputation*. The latter two, as multiple imputation methods, all belong to nondeterministic imputation method, used to create multiple completed data sets. While the observed values never change, the imputed values vary from one completed data set to the next. Once the completed data sets have been created, each completed data set is analyzed alone. *Regression Imputation* is relatively simple to use (Little & Rubin, 2002; Schafer, 1997). In *Regression Imputation*, the model is first fitted using maximum likelihood. After that, model parameters are set equal to their maximum likelihood estimates, and linear regression is used to predict the unobserved values for each case as a linear combination of the observed values for that same case. Predicted values are then plugged in for the missing values (Arbuckle, 2007). On the whole, in light of the advantages of the Maximum likelihood method (ML) compared to the conventional data imputations, moreover, given Multiple Imputation has

one notable inconvenience because it produces several completed data sets which give rise to different results every time you use it, the current study adopted the first imputation method provided by software *AMOS*, i.e., *Regression Imputation* to deal with the missing data in the scales used in the current study. While for the general situation questionnaire, given ML and MI all need model to estimate, thus are not appropriate for these uncontinuous variables, the current study adopted *Mean Substitution* to deal with the missing data.

3.5.2 Data Analysis Methods

The current study used different statistical techniques and softwares to analyze the data. In terms of statistical softwares, Statistical Product and Service Solutions (*SPSS* v.19.0) and Analysis of Moment Structure (*AMOS* v.19.0) were used to analyze the data. The significant level was set at .05. The following sections describe the data analysis strategies used in the current study.

Descriptive statistics (frequencies, percentages, mean, standard deviation, and correlation analysis) are used to summarize the overall trends in the data and compare the scores (Creswell, 2005). The following demographic and professional variables were reported for each participant: age, gender, marital status, educational level, and so on.

Inferential statistics are used to make inferences about the population parameters based on sample statistics (Hinkle, Wiersma, & Jurs, 1998). In order to determine the differences of the scores in each scale and subscale among different demographic groups, the current study performed *t*-test, *F*-test.

In addition, in order to determine the construct validity of the measures,

the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were applied. To estimate reliabilities of scales, Cronbach's alpha is generally regarded as the most appropriate type of reliability index for survey research (Schumacher & McMillan, 1993). Thus, to establish the reliability of the three instruments in the current study, internal consistency was estimated with Cronbach's alpha.

Given the current study intended to model the relationship within the specific system of explored variables, and suggested that the direct effect of organizational justice will weaken in predicting organizational commitment when job burnout is added into the model. Thus confirmatory factor analysis (CFA) was applied to test structural equation models through the software of *AMOS*.

In view of the application of *AMOS*, it is necessary to introduce the knowledge of *structural equation modeling* (SEM). The term *structural equation modeling* conveys two important aspects of the procedure: (a) that the causal processes under study are represented by a series of structural (i.e., regression) equations, and (b) that these structural relations can be modeled pictorially to enable a clearer conceptualization of the theory under study (Byrne, 1998). Once the model is specified, its plausibility is tested based on sample data that comprise all observed variables in the model. The primary task in this model-testing procedure is to determine the goodness-of-fit between the hypothesized model and the sample data. The structure of the hypothesized model is imposed on the sample data, and then tested as to how well the observed data fit the restricted structure (Byrne, 1998).

SEM estimates a series of separate, but interdependent, multiple regression equations simultaneously by specifying the structural model (Hair, Anderson, Tatham, & Black, 1995). Thus, it is a very useful technique when one dependent variable becomes an independent variable in subsequent

relationships. For example, job burnout is treated as initial dependent variable, which in turn becomes independent variable in terms of its influence on organizational commitment in this study. SEM differs from other multivariate techniques in that it uses only the variance/covariance or correlation matrix as its input data. The focus of SEM is not on individual observations, but on the pattern of relationships across respondents (Hair et al., 1995, p. 635).

SEM has a two-stage process: measurement model and structural model. The measurement model defines relations between the observed and unobserved variables (Byrne, 1998, p.10). It also describes the reliability and validity of the observed variables (Jöreskog & Sörbom, 1992). The structural model defines relations among the latent variables. It specifies which latent variables directly or indirectly influence changes in the values of other latent variables in the model (Byrne, 1998). It is also of note that sample size plays an important role in the estimation of SEM. A minimum recommended level is five observations for each estimated parameter (Hair et al., 1995).

When the distribution of the observed variable is not normal, a solution is to use an alternative estimator (Bollen, 1995). In this case, an adequate alternative is to use Satorra-Bentler statistic (Satorra & Bentler, 2001), which provides a way to treat nonnormal data.

In terms of measurement model, according to many researchers, this study evaluated from three aspects: dimensionality, reliability, and validity (Fornell & Larcker, 1981). Dimensionality test by CFA can be used to determine whether the factors which the indicator variables load onto belong to a same latent variable. Construct reliability demands that indicators which are related to the same construct should have a close correlation to each other (Fornell & Larcker, 1981). In this study, construct reliability was tested using indicator reliability, composite reliability (CR) and average variance extracted (AVE). Indicator reliability, in fact, is just equal to the square of standardized loading

of indicator variable, i.e., Squared Multiple Correlation (SMC). Generally, the recommended value for indicator reliability is ≥ 0.5 .

Composite reliability is a measure of the internal consistency of the construct indicators, representing the degree to which they indicate the common latent construct (Hair et al., 2008). A commonly used threshold value for acceptable reliability is .70 (Bagozzi & Yi, 1988). In this study, the formula below was used to calculate the composite reliability index:

$$\text{Composite Reliability} = \frac{(\sum L_i)^2}{(\sum L_i)^2 + \sum \varepsilon_j}$$

Where L_i = the standardized factor loadings for a factor, and ε_j = the error variance associated with the individual indicator variable.

Another measure of Construct reliability is the average variance extracted measure. Average variance extracted measures can be defined as the amount of shared or common variance among the indicators for a construct. Higher values represent a greater degree of shared representation of the indicators with the construct. The average variance extracted value for a construct should exceed .50 (Hair et al., 1995). In this study, the formula below was used to calculate the average variance extracted estimates:

$$\text{Average Variance Extracted} = \frac{\sum L_i^2}{\sum L_i^2 + \sum \varepsilon_j}$$

Where L_i = the standardized factor loadings for a factor, and ε_j = the error variance associated with the individual indicator variable.

Validity is a measure of the extent to which the indicators accurately measure what they are supposed to measure (Hair et al., 1995). Construct validity focuses on the extent to which data exhibit evidence of convergent validity and discriminant validity.

Convergent validity is the extent to which different instruments concur in

their measurement of the same construct. Convergent validity is assessed by reviewing the t tests for the factor loadings. Convergent validity can also be assessed from the measurement model by determining whether each indicator's estimated pattern coefficient on its posited underlying construct factor is significant (greater than twice its standard error) (Anderson & Gerbing, 1988).

Discriminant validity is the extent to which different instruments diverge in their different constructs. The correlations between the measures of these constructs should be minimal. Discriminant validity can be assessed by determining whether the average variance extracted (AVE) for each construct is higher than the square of the correlation between any pair of single constructs (Fornell & Larcker, 1981; Hulland, 1999). In addition, it is also necessary to evaluate the content validity of a measure model. Table 3.7 shows the indicators for evaluating the measure models.

Table 3.7.

The indicators for evaluating the measure models

Analysis of dimensionality		Confirmatory factor analysis (CFA)
Analysis of reliability		Indicator reliability Composite reliability Average variance extracted (AVE)
Analysis of validity	Content validity	Literature review
	Convergent validity	Each indicator's estimated pattern coefficient is significant
	Discriminant validity	Average variance extracted (AVE) for each construct is higher than the square of the correlation between the construct and any other single construct (Fornell & Larcker, 1981)

Note. DeVised by the current study, according to Hair et al. (2008).

Confirmatory Factor Analysis (CFA) was used to estimate the adequacy of the measurement model and structural model. The adequacy of the models was determined by several goodness of fit statistics which divided into three groups: first, absolute goodness of fit indexes, including Chi-square, Relative Chi-square ($\chi^2/\text{d.f.}$), Goodness-of-fit Index (GFI), Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), and so on; second, incremental goodness of fit indexes, such as Adjusted Goodness-of-Fit Index (AGFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI); third, simplified goodness of fit indexes, including Akaike's Information Criterion (AIC) and

Consistent Akaike's Information Criterion (CAIC), and so on. According to several researchers (Bagozzi & Yi, 1988; Bentler, 1990, 1992; Bentler & Bonnett, 1980; Carmines & Mclver, 1981; Hair et al., 2005), the current study adopted the following goodness of fit indexes to evaluate the structural equation model: Relative Chi-square ($\chi^2/\text{d.f.}$), Goodness-of-fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Normed Fit Index (NFI), Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI).

The primary task in the model-testing procedure is to determine the goodness-of-fit between the hypothesized model and the sample data. Chi-square has been the traditional measure used to test the closeness of fit between the unrestricted sample covariance and the restricted covariance matrix. Therefore, a nonsignificant chi-square difference between the hypothesized model and the sample data indicates that the hypothesized model is well fitted to the sample data. However, because the chi-square formula contains sample size, with large sample (e.g., more than 200 cases) and real-world data, the chi-square statistic is inflated, and will always be statistically significant even if the model provides a good fit (James, Mulaik, & Brett, 1982; Colquitt, 2001). For this reason, many researchers gauge chi-square relative to its degrees of freedom (i.e., Relative Chi-square: χ^2/df) as an ad hoc fit measure (e.g., Arbuckle, 2007; Bagozzi et al., 1988). Carmines and Mclver (1981) recommended that values for a good fit should be less than five, with values between two and three deemed acceptable (Chin & Todd, 1995; Hair et al., 1998). Therefore, this study adopted Relative Chi-square as an index for goodness of fit statistics.

Table 3.8 summarized the recommended values (i.e., cutoff criteria) for the goodness-of-fit indexes adopted in the current study.

Table 3.8.

Cutoff criteria for fit indexes

<i>Acronym</i>	<i>Full Name</i>	<i>The Suggested Value</i>	<i>Source From</i>
$\chi^2/\text{d.f.}$	Relative Chi-square	≤ 5	Carmines & McIver (1981)
GFI	Goodness-of-fit Index	≥ 0.8	Browne & Cudeck (1993)
AGFI	Adjusted Goodness-of-Fit Index	≥ 0.8	MacCallum et al. (1997)
RMR	Root Mean Square Error	≤ 0.08	Hu & Bentler (1999)
RMSEA	Root Mean Square Error of Approximation	≤ 0.08	Hair et al. (2005)
CFI	Comparative Fit Index	≥ 0.8	Marsh, Hau, & Wen (2004)
NFI	Normed Fit Index	≥ 0.9	Hair et al. (2005)

Given intending to test the mediating effect of job burnout, here the current research introduced briefly some principles relevant to mediating effect.

As for mediating effect, Baron and Kenny (1986) pointed out, according to the different effects, the intermediate variables can be classed into two categories: mediator and moderator. Taking into account the effect of independent variable on the dependent variable, if X affects Y through M, M is the mediator. Mediation stands for the mechanism of the effect of independent variable on dependent variable, principally indicating the way through which independent variable affects dependent variable. In social and behavioral science research, when the relationship between independent variable and dependent variable is quite strong, it is usually proper to consider introducing mediator into it. When introducing mediator, it usually required a quite strong relationship between mediator and dependent variable, as well as that between mediator and independent variable.

Mediation can help to explain the inner principle and mechanism of the relationships among variables, playing important role in research (Chen, Xu, & Fan, 2008).

There are two kinds of mediation: Partial mediation and complete (full) mediation. Complete mediation is the case in which variable X no longer affects Y after M has been controlled and so the direct effect of X on Y is no longer significant statistically. Partial mediation is the case in which the path from X to Y is reduced in absolute size but is still significant statistically when the mediator M is introduced; in other words, besides the direct effect, independent variable also affects dependent variable indirectly through the mediator. The current research tested the mediation by structural equation model, firstly testing the partial mediation, then to test the complete mediation.



CHAPTER IV

RESULTS

4.1 INTRODUCTION

Just as introduced in Chapter III, the current research conducted a pilot survey to test preliminarily the internal reliability and validity of the measures. Through the pilot survey, the results manifested that the questionnaire embodied good feature of psychometrics on the whole. Thus the current study obtained the formal questionnaire for further survey. This chapter presents the results of the statistical analysis of the data of formal survey. It begins with the characteristics of the sample and the descriptive statistics of the variables. A discussion of reliability and validity of the measures used in the current research is reported. The results of F test, t test and confirmatory factor analysis (CFA) of the study are also presented. Furthermore, the structural equation models with the hypotheses are examined. Finally, the chapter concludes with a summary of the findings.

4.2 SAMPLE CHARACTERISTICS AND DESCRIPTIVE STATISTICS

Table 4.1 provides the quantity statistics of formal survey sample with regard to district, university, the quantity of questionnaires distributed and returned, and total valid sample. Table 4.2 presents a profile of the respondents including gender, age, educational level, marital status, academic rank, length of teaching service, monthly income and situation of promotion.

Table 4.1.

The sample distribution of formal survey

	Amount of distributed questionnaires	Amount of returned questionnaires	Amount of valid questionnaires	% of valid questionnaires
University				
Pingdingshan College	250	228	228	44.60
Zhengzhou University	70	60	60	12.00
Sias International University	25	19	19	3.80
Zhongzhou University	45	37	37	7.40
Zhengzhou Railway	45	37	37	7.40
Professional Technology College				
Huabei Water Conservancy and Electric Power College	65	54	54	10.60
Total	500	435	435	85.80

Table 4.2.Demographic characteristics distribution of formal survey sample ($N = 435$)

variable	Frequency	%
<i>Gender</i>		
Male	185	42.5
Female	250	57.5
<i>Age</i>		
≤30 years old	166	38.2
31-40 years old	196	45.1
≥41 years old	73	16.8
<i>Educational Level</i>		
Bachelor	131	30.1
Master	265	60.9
Doctor	39	9.0
<i>Length of Teaching Service</i>		
≤2 years	62	14.3
3-5 years	151	34.7
6-10 years	126	29.0
≥11 years	96	22.1
<i>Marital Status</i>		
Unmarried	92	21.1
Married	343	78.9
<i>Academic Rank</i>		
Assistant	124	28.5
Instructor	217	49.9
Associate professor or professor	94	21.6
<i>Monthly Income</i>		
≤4000 CNY	378	86.9
4000-6000 CNY	46	10.6
≥6000 CNY	11	2.5
<i>Situation of Promotion^a</i>		
by a wide margin	52	12.0
By a little margin	197	45.3
No	186	42.8

Note. ^a Situation of promotion during the last three years.

According to Table 4.2, most of the respondents were no more than 40 years old (83.3%) and were teachers with at least Master degree (69.9%). Of this sample, 250 (57.5%) were female and 181 (42.5%) were male. With regard to length of teaching service, more than two third of respondents (78.0%) had less than 10 years experience. As for marital status, most of the sample had married (78.9%). For academic rank, the largest group of respondent (49.6%) was instructor, while respondents with associate professor or professor rank made up only 21.6 % of the sample. In terms of monthly income, overwhelming majority of respondents (86.6%) earned no more than 4000 CNY; only 2.6% of respondents had salaries of more than 6000 CNY. For situation of promotion, during the recent three years, a little more than one tenth of respondents (12.0%) promoted by a large margin, the largest group of respondents (45.2%) had promotion by a little margin, the rest respondents (42.8%) reported never promoted during last three years.

Descriptive statistics for the variables examined in this study are also presented. Tests of internal consistency (Cronbach's alpha) were conducted to assess the reliability of each of the scales used.

All of the measures included in the questionnaire showed adequate levels of internal consistency reliability (.72 for the measure of job burnout, .73 for the measure of organizational commitment, .93 for the measure of organizational justice). Table 4.3 reports the descriptive statistics for the measures used, including mean, standard deviation, correlations, and internal consistency reliability for each dimension of measures.

Table 4.3.

Means, standard deviations, reliabilities, and correlations of the scaled variables ($N = 435$)

<i>Variable</i>	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9
1. Distributive Justice (DJ)	10.72	4.43	0.89	-								
2. Procedural Justice (PJ)	23.14	6.01	0.94	.33**	-							
3. Interactional Justice (IJ)	27.20	6.17	0.91	.37**	.35**	-						
4. Emotional Exhaustion (EE)	18.58	10.24	0.92	-.43**	-.25**	-.53**	-					
5. Personal Accomplishment (PA)	22.27	7.22	0.87	.32**	.16**	.48**	-.51**	-				
6. Depersonalization (DP)	5.95	6.08	0.94	-.35**	-.11*	-.34**	.52**	-.49**	-			
7. Affective Commitment (AC)	20.61	4.15	0.92	.43**	.26**	.39**	-.42**	.33**	-.42**	-		
8. Continuance Commitment (CC)	13.54	4.31	0.88	-.31**	-.22**	-.37**	.43**	-.31**	.36**	-.38**	-	
9. Normative Commitment (NC)	19.94	4.38	0.87	.28**	.27**	.19**	.34**	.46**	-.39**	.33**	-.45**	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

According to Table 4.3, internal consistency reliability for each dimension of the measures was from .87 to .94, indicating that these subscales had good reliabilities. The mean values for distributive justice, procedural justice, and interactional justice were 10.72, 23.14, and 27.20, respectively. While the full values for these three subscales of organizational justice were 20, 35, and 45, respectively. Thus each mean value corresponding to the three subscales of organizational justice exceeded its theoretical mid-value, indicating that the participants' perception of organizational justice lay in up moderate level. Relatively, the participants' perception of procedural justice was the highest one among the three kinds of perception of organizational justice. In terms of the three dimensions of organizational commitment, i.e., emotional commitment, continuance commitment, and normative commitment, the mean values were 20.61, 13.54, and 19.94, respectively. While the full values for these three subscales of organizational commitment are all 30. Thus the mean values corresponding to affective commitment and normative commitment exceeded respectively their theoretical mid-values, indicating that the participants' affective commitment and normative commitment lay in up moderate level, while the mean value for continuance commitment did not exceeded its theoretical mid-value. Relatively, the participants' affective commitment was the highest one among the three kinds of organizational commitment. For job burnout, the mean values corresponding to emotional exhaustion, accomplishment, and depersonalization were 18.58, 22.27, and 5.95, respectively. While the full values for these three subscales of organizational commitment are 54, 48, and 30, respectively. None of the mean values corresponding to the three subscales of job burnout was up to moderate level. However, for job burnout, the authors of MBI particularly established a norm used for its interpretation (Maslach et al., 1996, p. 5). Guidelines for interpreting the results from the MBI indicate that the instrument produces

three sub-scale scores, for the two scales *Emotional Exhaustion* and *Depersonalization*, higher values represent higher levels of burnout. The third scale is labeled *Personal Accomplishment* which is coded such that higher scores represent lower levels of burnout (indicated by higher perceived levels of personal accomplishment). Burnout is not viewed as a dichotomous variable, but conceptualized as a continuous variable. Since the three sub-scale scores are measured on different absolute measurement scales (e.g., there are different numbers of items in each sub-scale, and the score is computed by summing the items in the sub-scale), the results from the MBI are most meaningful when they are classified into the categories of “Low Burnout,” “Average Burnout,” and “High Burnout” for each sub-scale:

- A high degree of burnout is reflected in high scores on the *Emotional Exhaustion* (EE) and *Depersonalization* (DP) subscales and in low scores on the *Personal Accomplishment* (PA) subscales.
- An average/moderate degree of burnout is reflected in average scores on the three subscales.
- A low degree of burnout is reflected in low scores on the *Emotional Exhaustion* (EE) and *Depersonalization* (DP) subscales and in high scores on the *Personal Accomplishment* (PA) subscale (Maslach et al., 1996, p. 5).

In addition, since subjects from widely diverse careers, educational levels, ethnic groups, etc., were used in establishing the norms used for this interpretation, it is important to select the most appropriate normative group for establishing the classification of data for a specific study. The norms that were considered most appropriate for classifying the findings from the subjects in this study were the “Post Secondary Education” group which included university education.

Data collected in earlier studies from individuals working in post secondary education settings were used to establish the following interpretive

guidelines for the *Emotional Exhaustion* sub-scale: scores of 13 or less are defined as “Low Levels” of *Emotional Exhaustion* burnout; scores of 14 to 23 are defined as “Average Levels” of *Emotional Exhaustion* burnout; and scores of 24 or higher are defined as “High Levels” of *Emotional Exhaustion* burnout. Data collected in earlier studies from individuals working in post secondary settings were used to establish the following interpretive guidelines for the *Depersonalization* sub-scale: scores of two or less are defined as “Low Levels” of *Depersonalization* burnout; scores of three to eight are defined as “Average Levels” of *Depersonalization* burnout; scores of nine or higher are defined as “High Levels” of *Depersonalization* burnout. Data collected in earlier studies from individuals working in post secondary education settings were used to establish the following interpretive guidelines for the “Personal Accomplishment” sub-scale: scores of 43 or greater are defined as “Low Levels” of *Personal Accomplishment* burnout; scores of 42 to 36 are defined as “Average Levels” of *Personal Accomplishment* burnout; and scores of 35 or less are defined as “High Levels” of *Personal Accomplishment* burnout (Maslach et. al., 1996) (See Table 4.4 for the normative categorization of MBI Scores for Post Secondary Education for each of the sub-scales).

Table 4.4.Normative categorization of post secondary education MBI-ES^a scores

Level of Burnout	Maslach Burnout Inventory Form Educators Scales Facets		
	Emotional	Personal	
	Exhaustion	Depersonalization	Accomplishment
Low (Lower third)	≤ 13	≤ 2	≥ 43
Average (Middle third)	14-23	3-8	42-36
High (Upper third)	≥ 24	≥ 9	≤ 35

Note. ^a Maslach et al., 1996.

The *Emotional Exhaustion* raw scores of the participants in the current study ranged from a low of 0 to a high of 54, with a possible range of scores from 0 to 54. The mean raw score on this sub-scale was 18.53 ($SD = 10.26$). Based on the MBI interpretive guidelines, the smallest group of respondents ($N = 91$, 20.9%) were found to have *Emotional Exhaustion* scores classified as high burnout. 142 respondents (32.6%) were in the low burnout category. The largest group of respondents had scores in the average burnout category ($N = 202$, 46.4%) (see Table 4.5). Therefore, on the whole, in terms of the dimension *Emotional Exhaustion*, the current participants obviously more intensively lay in an average degree of burnout compared with the original American norm.

Table 4.5.

Levels of “Emotional Exhaustion” burnout on the MBI-ES among the respondents in the current study ($N = 435$)

Level of Burnout	Respondent Emotional Exhaustion Scores Number (%)
High	91 (20.9)
Average	202 (46.4)
Low	142 (32.6)
Total ^a	435 (100.0)

Note. ^a Respondent Group Mean Score = 18.53; $SD = 10.26$.

Raw scores on the *Depersonalization* subscale ranged from a low of 0 to a high of 27. The possible range of scores was from 0 to 30. The mean *Depersonalization* score was 5.91 ($SD = 6.05$). When the *Depersonalization* subscale scores were examined utilizing the interpretive guidelines for the Post Secondary Educators group as provided by the MBI-ES Manual (Maslach et al., 1996), the largest group of respondents ($N = 173$, 39.8%) were in the “low” category of burnout. Slightly more than one-fourth ($N = 121$, 27.8%) of the study participants had scores which classified them in the high burnout category on this subscale (see Table 4.6). Thus, on the whole, in terms of the dimension *Depersonalization*, the current participants relatively more intensively lay in a lower degree of burnout compared with the original American norm. However, in the current study, more participants had a high degree of burnout on the dimension *Depersonalization* rather than on the dimension *Emotional Exhaustion*.

Table 4.6.

Levels of “Depersonalization” burnout on the MBI-ES among the respondents in the current study ($N = 435$)

Level of Burnout	Respondent Depersonalization Scores Number (%)
Low	173 (39.8)
Average	141 (32.4)
High	121 (27.8)
Total ^a	435 (100.0)

Note. ^a Respondent Group Mean Score = 5.91; $SD = 6.05$.

Raw scores on the *Personal Accomplishment* sub-scale ranged from a low of 7 to a high of 43. The possible range of scores was from 0 to 48. The mean *Personal Accomplishment* score was 22.28 ($SD = 7.25$). When the *Personal Accomplishment* scores were examined utilizing the interpretive guidelines for the Post Secondary Educators group as provided by the MBI-ES Manual (Maslach et al., 1996), the largest group of respondents ($N = 413$, 94.9%) were in the “high” category of burnout. Almost all of the rest respondents ($N = 20$, 4.6%) had scores which classified them in the average burnout category on this subscale (see Table 4.7). Only 2 respondents had scores more than 42, thus only 0.5% respondents were in the “low” category of burnout. Obviously, compared with the original American norm, in the current study, most participants demonstrated insufficient *Personal Accomplishment*, that is, most participants had a high degree of burnout on the dimension *Personal Accomplishment*. On this dimension of burnout, the participants demonstrated a biggest difference from the equivalents of American norm. However, the

current result about the dimension *Personal Accomplishment* was consistent with Liu (2007) who also found that Chinese teachers' perception of *Personal Accomplishment* was obviously lower than that of American teachers. By means of MBI-ES, Liu (2007) sampled 1447 teachers of primary and middle school from Wuhan, China to investigate the situation of teachers' job burnout. According to Maslach et al. (1996), in terms of scores of MBI, Liu (2007) took the points 1/3 and 2/3 of the participants' distribution as critical values. The results showed in Table 4.8.

Table 4.7.

Levels of "Personal Accomplishment" burnout on the MBI-ES among the respondents in the current study ($N = 435$)

Level of Burnout	Respondent
	Personal Accomplishment
	Scores Number (%)
Low	2 (.5)
Average	20 (4.6)
High	413 (94.9)
Total ^a	435 (100.0)

Note. ^a Respondent Group Mean Score = 22.28; $SD = 7.25$.

Table 4.8.

Comparison of normative categorization of MBI-ES^a scores for elementary and secondary school teachers between U.S.A. and P.R.C.

Region	Level of	Emotional	Personal	
	Burnout	Exhaustion	Depersonalization	Accomplishment
U.S.A. (N=4163)	Low	≤16	≤8	≥37
	(Lower third)			
	Average	17-26	9-13	36-31
	(Middle third)			
	High	≥27	≥14	≤30
	(Upper third)			
P.R.C. (Wuhan) (N=1447)	Low	≤16	≤3	≥28
	(Lower third)			
	Average	17-22	4-5	27-20
	(Middle third)			
	High	≥23	≥6	≤19
	(Upper third)			

Note. ^a Maslach et al., 1996.

According to Table 4.8, the Chinese elementary and secondary school teachers' scores in the three dimensions of burnout were obviously lower than the equivalents of American norm.

In deed, the respondents of Liu (2007) were elementary and secondary school teachers, while those of the current study were university teachers. The results in the two studies, however, reflected a same phenomenon, that is to say, Chinese subjects showed lower scores in job burnout, particularly in the dimension *Personal Accomplishment*. The reason for this may be that Chinese

people are generally influenced by Confucianism which advocates modesty and connotation rather than shows off or displays openly. In particular, Chinese teachers, as educators, are more deeply influenced by the Chinese historical civilization. Thus, facing the questionnaire inquiring directly personal accomplishment, although it is just anonymous, the participants more likely showed conservative or modest self-evaluations in terms of personal accomplishment rather than frank self-evaluations based on their truths. Of course, the probability of responding frankly can not be ruled out. May be the results just reflected the participants' true perception of personal accomplishment.

4.3 DEMOGRAPHIC DIFFERENCE COMPARISON FOR OJ, JB AND OC

In order to test the H(II), that is, to test the effects of the demographic characteristics of interest (i.e., gender, age, length of teaching service, marital status, education level, academic rank, income, and promotion situation, similarly hereinafter) on organizational justice, job burnout, and organizational commitment, the current study used analysis of variance (ANOVA) and *t* test to compare and analyzed the score differences among different groups of participant according to demographic characteristics. The results are shown in Table 4.9–4.16.

Table 4.9.Results of *t* test for gender (*N* = 435)

<i>Variable</i>	Male (<i>N</i> = 185)		Female (<i>N</i> = 185)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
OJ	62.09	14.05	60.63	13.27	1.11
Procedural Justice	23.72	6.11	22.85	5.94	1.48
Distributive Justice	13.31	4.51	10.40	4.35	2.12*
Interactional Justice	27.07	6.46	27.39	6.01	-.53
JB					
Emotion Exhaustion	18.46	10.85	18.59	9.83	-.13
Personal Accomplishment	22.34	7.39	22.24	7.15	.14
Depersonalization	6.45	6.30	5.51	5.84	1.61
OC	54.08	6.68	54.10	6.98	-.05
Affective Commitment	19.85	4.45	20.05	4.34	-.47
Continuance Commitment	13.56	4.45	13.51	4.17	.11
Normative Commitment	20.67	4.16	20.54	4.17	.31

Note. **p* < .05, ***p* < .01, ****p* < .001.

The results of *t* test indicated that *gender* only influenced distributive justice. Specifically, the distributive justice scores of male teachers were significantly higher than those of female teachers. While between *gender* and all the rest variables, no significant relationship existed.

Table 4.10.Results of ANOVA for age ($N = 435$)

	≤30 years old		31-40 years old		≥41 years old		
	(N = 166)		(N = 196)		(N = 73)		
Variable	M	SD	M	SD	M	SD	F
OJ	61.85	13.14	60.60	14.40	61.67	12.56	.42
Procedural Justice	23.55	5.87	22.78	6.23	23.64	5.78	.96
Distributive Justice	10.34	4.37	10.77	4.47	11.84	4.36	2.98*
Interactional Justice	27.95	5.85	27.05	6.64	26.19	5.63	2.25*
JB							
Emotion Exhaustion	17.49	9.20	18.62	11.35	19.38	9.36	2.52*
Personal Accomplishment	22.40	7.26	22.31	7.24	21.93	7.32	.11
Depersonalization	5.54	5.81	6.00	6.00	6.52	6.72	.71
OC	54.78	6.36	54.16	7.04	52.33	7.18	3.31*
Affective Commitment	20.53	4.04	19.73	4.66	19.32	4.30	2.48*
Continuance Commitment	13.22	4.07	14.03	4.31	12.89	4.59	1.63
Normative Commitment	21.04	3.73	20.40	4.45	20.12	4.24	1.62

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *age*, there were significant differences in scores of distributive justice, interactional justice, emotion exhaustion, organizational commitment and affective commitment between different *age* groups of participant. Specifically, in terms of distributive justice and interactional justice, the group *more than 40 years old* was significantly higher than the other *age* groups; in terms of organizational commitment and affective commitment, the group *no more than 30 years old* was significantly higher than the group *more than 40 years old*. As for emotion exhaustion, the

group *more than 40 years old* was significantly higher than the group *no more than 30 years old*.

Table 4.11.

Results of ANOVA for educational level ($N = 435$)

	Bachelor		Master		Doctor		
	(N = 166)		(N = 196)		(N = 73)		
Variable	M	SD	M	SD	M	SD	F
OJ	61.66	14.39	60.06	12.83	61.21	16.16	.09
Procedural Justice	23.27	6.01	23.13	5.95	23.62	6.64	.12
Distributive Justice	10.63	4.67	10.88	4.25	10.67	4.94	.16
Interactional Justice	27.76	6.36	27.05	5.91	26.92	7.52	.65
JB							
Emotion Exhaustion	17.75	10.24	18.89	9.81	18.77	13.15	.55
Personal Accomplishment	22.82	7.45	22.16	7.32	21.36	5.98	.71
Depersonalization	5.21	5.48	6.20	6.29	6.31	6.22	1.26
OC	54.10	6.78	54.06	6.84	52.28	7.27	.02
Affective Commitment	20.27	4.42	19.77	4.40	20.28	4.22	.69
Continuance Commitment	13.27	4.69	13.66	4.16	13.54	3.73	.35
Normative Commitment	20.56	4.43	20.64	3.97	20.46	4.56	.04

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *educational level*, there was no significant difference in scores of all the investigated variables between different *educational level* groups of participant.

Table 4.12.Results of ANOVA for length of teaching service ($N = 435$)

	≤2 years		3-5 years		6-10 years		≥11 years		
	(N = 62)		(N = 151)		(N = 126)		(N = 96)		
Variable	M	SD	M	SD	M	SD	M	SD	F
OJ	67.98	12.50	61.54	13.61	59.12	13.57	59.26	13.11	7.10***
Procedural Justice	25.31	5.78	23.72	6.04	22.24	6.03	22.38	5.79	4.70**
Distributive Justice	12.36	3.96	10.72	4.42	10.41	4.48	10.35	4.54	3.25*
Interactional Justice	30.32	5.28	27.10	6.40	26.47	6.12	26.53	6.03	6.40***
JB									
Emotion Exhaustion	14.43	8.11	19.27	10.76	19.32	10.43	18.99	10.02	3.94**
Personal Accomplishment	24.48	7.36	22.21	7.75	21.89	7.00	21.50	6.50	2.43*
Depersonalization	4.15	4.93	6.34	6.20	6.40	6.22	5.75	6.13	2.30*
OC	55.71	5.13	54.55	7.31	53.94	6.55	52.54	7.20	3.10*
Affective Commitment	21.60	3.81	19.93	4.49	19.75	4.40	19.24	4.35	3.90**
Continuance Commitment	12.65	4.12	13.75	4.15	13.86	4.23	13.32	4.62	1.34
Normative Commitment	21.47	3.20	20.87	4.07	20.33	3.97	19.97	4.96	2.04*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *length of teaching service*, except for continuance commitment, there were significant differences in scores of all the other investigated variables between different teaching age groups of participant. Specifically, in terms of organizational justice, procedural justice, distributive justice and interactional justice, the group *no more than 2 years* was significantly higher than all the other three

groups. In terms of emotion exhaustion and depersonalization, the group *no more than 2 years* was significantly lower than the other three groups; while in terms of accomplishment, the positions were reversed, i.e., the group *no more than 2 years* was significantly higher than the other three groups. In terms of organizational commitment, the group *11 years or more* was significantly lower than the other three groups. In terms of affective commitment and normative commitment, the group *no more than 2 years* was significantly higher than the other three groups.

Table 4.13.Results of ANOVA for marital status ($N = 435$)

	<i>Unmarried</i>		<i>Married</i>		
	<i>(N = 92)</i>		<i>(N = 343)</i>		
<i>Variable</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>
OJ	64.77	14.87	60.31	13.11	2.81**
Procedural Justice	24.32	6.34	22.92	5.91	1.99*
Distributive Justice	11.77	4.66	10.52	4.34	2.42*
Interactional Justice	28.67	6.53	26.87	6.07	2.49*
JB					
Emotion Exhaustion	18.02	11.91	18.67	9.79	-.54
Personal Accomplishment	22.89	7.80	22.12	7.10	.91
Depersonalization	6.00	6.22	5.88	6.02	.16
OC	54.80	7.34	53.90	6.69	1.12
Affective Commitment	20.49	4.91	19.82	4.23	1.29
Continuance Commitment	13.43	4.23	13.56	4.30	-.24
Normative Commitment	20.88	4.27	20.52	4.13	.73

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that, for *marital status*, there were significant differences in scores of organizational justice, procedural justice, distributive justice, and interactional justice between different *marital status* groups of participant, while as far as the rest variables were concerned, no significant difference existed between different *marital status* groups. Specifically, in terms of organizational justice, procedural justice, distributive justice, and interactional justice, the unmarried teachers were significantly

higher than the married ones.

Table 4.14.

Results of ANOVA for academic rank ($N=435$)

<i>Variable</i>	Assistant ($N=124$)		Instructor ($N=217$)		Professor ($N=94$)		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
OJ	63.23	11.67	60.34	14.86	60.76	12.82	1.87
Procedural Justice	23.97	5.44	22.90	6.46	22.96	5.66	1.36
Distributive Justice	10.57	4.18	10.69	4.54	11.28	4.54	.77
Interactional Justice	28.69	5.62	26.75	6.58	26.52	5.76	4.77**
JB							
Emotion Exhaustion	16.73	8.50	19.86	11.58	17.85	8.70	4.00*
Personal Accomplishment	23.25	7.21	21.73	7.13	22.27	7.51	1.73
Depersonalization	5.19	5.49	6.48	6.36	5.53	5.97	2.06
OC	55.85	6.47	53.64	6.87	52.83	6.89	6.30**
Affective Commitment	20.83	4.00	19.68	4.57	19.49	4.31	3.48*
Continuance Commitment	13.79	4.21	13.41	4.33	13.47	4.29	.33
Normative Commitment	21.23	3.67	20.55	4.28	19.87	4.41	2.88*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *academic rank*, there were significant differences in scores of interactional justice, emotion exhaustion, organizational commitment, affective commitment, and normative commitment between different *academic rank* groups of participant, while as far as the rest variables were concerned, no significant difference existed between different *academic rank* groups. Specifically, in terms of interactional

justice, the group *assistant* was significantly higher than the group *instructor* and *professor or associate professor*. In terms of emotion exhaustion, significant difference only existed between the group *assistant* and *instructor*, the latter was significantly higher than the former. In terms of organizational commitment and affective commitment, the group *assistant* was significantly higher than the other two groups, i.e., *instructor* and *professor or associate professor*. While in terms of normative commitment, significant difference only existed between the group *assistant* and *professor or associate professor*, the former was significantly higher than the latter.

Table 4.15.Results of ANOVA for monthly income ($N = 435$)

	≤3000 CNY		3000-5000 CNY		≥5000 CNY		
	(N = 378)		(N = 46)		(N = 11)		
Variable	M	SD	M	SD	M	SD	F
OJ	60.98	13.95	63.59	11.78	60.82	7.03	.76
Procedural Justice	23.08	6.15	24.00	5.26	24.72	3.95	.83
Distributive Justice	10.57	4.53	12.43	3.70	11.27	2.41	3.74*
Interactional Justice	27.33	6.28	27.15	5.49	24.82	6.21	.89
JB							
Emotion Exhaustion	18.52	10.28	17.80	10.26	22.09	9.78	.78
Personal Accomplishment	22.31	7.31	22.61	7.17	19.91	5.38	.64
Depersonalization	5.79	5.99	6.37	6.45	8.00	6.57	.86
OC	54.32	6.74	53.15	7.26	50.36	7.89	2.28
Affective Commitment	20.00	4.36	20.00	4.70	18.45	4.16	.67
Continuance Commitment	13.62	4.26	12.87	4.52	13.27	4.03	.65
Normative Commitment	20.69	4.09	20.28	4.58	18.64	4.57	1.46

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *monthly income*, there was significant difference only in scores of distributive justice between different *monthly income* groups of participants, while as far the rest variables, no significant difference existed between different *monthly income* groups. Specifically, in terms of distributive justice, the group *3000-5000 CNY* was significantly higher than the group *no more than 3000 CNY*.

Table 4.16.Results of ANOVA for situation of promotion ($N = 435$)

	By a little margin		By a wide margin		No promotion		
	(N = 52)		(N = 197)		(N = 186)		
Variable	M	SD	M	SD	M	SD	F
OJ	61.12	13.80	61.79	12.57	60.73	14.63	.23
Procedural Justice	23.44	6.17	23.38	5.59	22.99	6.43	.24
Distributive Justice	9.71	4.84	11.30	4.18	10.53	4.53	3.20*
Interactional Justice	27.96	6.43	27.10	5.79	27.21	6.57	.40
JB							
Emotion Exhaustion	18.33	11.33	18.79	10.24	18.32	10.02	.11
Personal Accomplishment	21.60	6.41	22.07	7.51	22.70	7.19	.63
Depersonalization	5.79	6.04	6.32	6.08	5.50	6.03	.90
OC	55.15	5.79	54.41	6.77	53.45	7.16	1.66
Affective Commitment	20.38	4.35	20.19	4.13	19.60	4.65	1.13
Continuance Commitment	13.58	3.65	13.57	4.21	13.47	4.54	.03
Normative Commitment	21.19	3.78	20.65	3.95	20.38	4.47	.81

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The results of ANOVAs indicated that for *situation of promotion*, there was significant difference only in scores of distributive justice between different *situation of promotion* groups of participant, while as far as the rest variables were concerned, no significant difference existed between different *situation of promotion* groups of university teachers. Specifically, in terms of distributive justice, the group *by a little margin* was significantly higher than the group *by a wide margin*.

4.4 MEASUREMENT MODEL

The purpose of a measurement model is to describe how well the observed indicators serve as a measurement instrument for the latent variables. In order to estimate the adequacy of the measurement model for each construct, Confirmatory Factor Analysis (CFA) was used in the current study. Just as introduced in Chapter III of the current study, CFA can be used to estimate the adequacy of the measurement model and structural model. Referring to the suggestions of several researchers (Bagozzi & Yi, 1988; Bentler, 1990, 1992; Bentler & Bonnett, 1980; Hair et al., 2005), the current study adopted the following goodness of fit indexes to evaluate the structural equation model: Relative Chi-square ($\chi^2/\text{d.f.}$), Goodness-of-fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Normed Fit Index (NFI), Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI). The recommended values of the goodness-of-fit indexes adopted in the current study are summarized in Table 3.8 in Chapter III.

As noted earlier, a minimum recommended sample level for the estimation of SEM is five observations for each estimated parameter (Hair et al., 1995). A total of 60 parameters were estimated in the study, thus the sample size for this study should exceed 300. Since the actual sample size of the current study was 435, therefore the sample size of the current study sufficed the minimum recommended level.

4.4.1 CFA for Organizational Justice

The original measurement model of organizational justice was a four-factor

model comprised of 20 indicators. The initial measurement estimation of the justice model did not fit well (see Table 4.17). Despite the relative chi-square value ($\chi^2/\text{d.f.}$) of 3.23 was smaller than 5, representing a good fit, and several other fit statistics also indicated that the model fit the actual data well (RMSEA = .072; GFI = .89; AGFI = .86; CFI = .93; NFI = .91), however, RMR = .115, was much more than the recommended value 0.08. In addition, regrettably, according to the recommendation of the modification index, no error of the indicators in the current study was highly correlated. Thus, the measurement model in the current study needed to redesign, rather than to modify through deleting observed variables. In view of the results of exploratory factor analysis (EFA) that, with Chinese sample, organizational justice has three dimensions, rather than four dimensions, because of the two factors interpersonal justice and informational justice integrating together into one factor, the current research proposed a three-factor organizational justice competing model.

The results of the estimation of the three-factor organizational justice model yielded a good fit between the model and data ($\chi^2/\text{d.f.} = 2.75$; RMSEA = .063; GFI = .91; AGFI = .88; CFI = .95; NFI = .92). It is notable that RMR = 0.050 (see Table 4.18). All the indexes indicated the three-factor organizational justice model was better fit to the data than the four-factor organizational justice model. Table 4.17 provides the final results of confirmatory factor analysis for organizational justice. The final CFA for organizational justice had three factors with 20 indicators. The last modified model fit the actual data perfectly.

Table 4.17.Measurement scale properties for OJ ($N = 435$)

Indicators	Completely Standardized Loadings*	Indicator Reliability	Error Variance
Procedural Justice			
PJ-1	.68	.46	.54
PJ-2	.61	.38	.62
PJ-3	.78	.61	.39
PJ-4	.64	.40	.60
PJ-5	.81	.65	.35
PJ-6	.75	.56	.44
PJ-7	.77	.59	.41
Distributive Justice			
DJ-1	.85	.73	.27
DJ-2	.92	.85	.15
DJ-3	.89	.79	.21
DJ-4	.85	.73	.27
Interactional Justice			
IT-1	.71	.50	.50
IT-2	.74	.55	.45
IT-3	.77	.59	.41
IT-4	.69	.48	.52
IT-5	.75	.57	.43
IT-6	.74	.55	.45
IT-7	.72	.53	.47
IT-8	.72	.52	.48
IT-9	.73	.53	.47

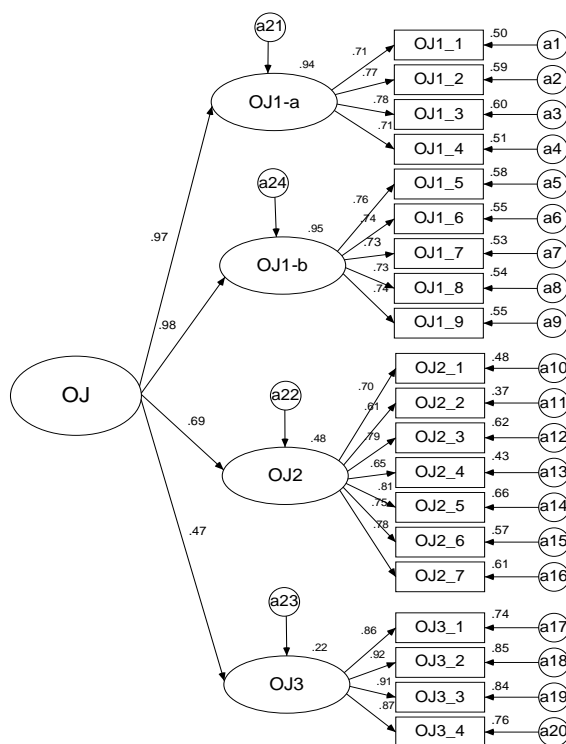
Note. *All t -values were significant at $p < .05$.

Table 4.18.

The fit indexes comparison of the four-factor model and the three-factor model of organizational justice

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Four-factor model	535.38	166	3.225	.072	.893	.115	.864	.907	.934
Three-factor model	458.48	167	2.745	.063	.906	.050	.881	.920	.948

According to the above comparison and analyses, the modified Model was determined as the final measurement model for organizational justice, and the four-factor and three-factor models for OJ are depicted in Figure 4.1 and 4.2, respectively.

**Figure 4.1.** The second-order four-factor model for OJ.

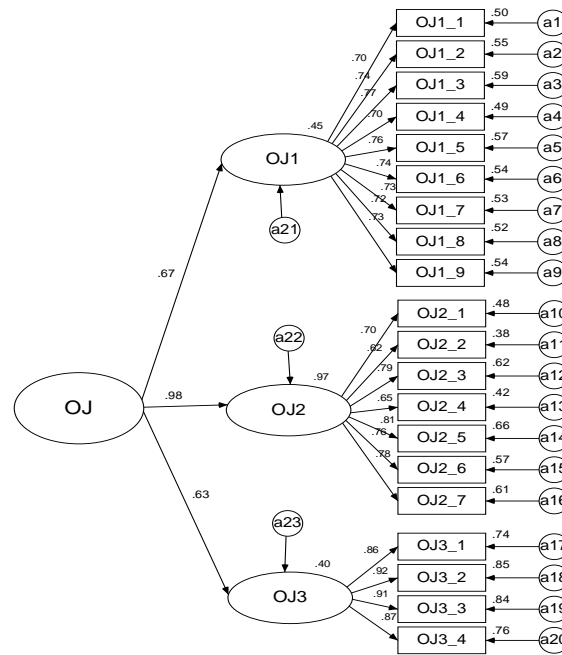


Figure 4.2. The second-order three-factor model for OJ.

4.4.2 CFA for Job Burnout

The original measurement model of job burnout is a three-factor model comprised of 22 indicators. The results of CFA showed that the initial measurement estimation of the job burnout model fitted well. Specifically, the Relative Chi-square value ($\chi^2/\text{d.f.}$) was 1.93, much smaller than the suggested critical value 5, representing a good fit. The other fit statistics also indicated that the model fit the actual data well (RMSEA = .046; RMR = .058; GFI = .92; AGFI = .91; CFI = .97; NFI = .94). In addition, according to the recommendation of the modification index, no error of the indicators in the current study was highly correlated. Thus, the job burnout measurement model in the current study needed not to modify any more. Table 4.19 and 4.20 provide the final results of CFA for job burnout, showing that the burnout model has 22 indicators just as the original measurement.

Therefore, these 22 indicators model (see Figure 4.3) was determined as the final measurement model for job burnout.

Table 4.19.Measurement scale properties for JB ($N = 435$)

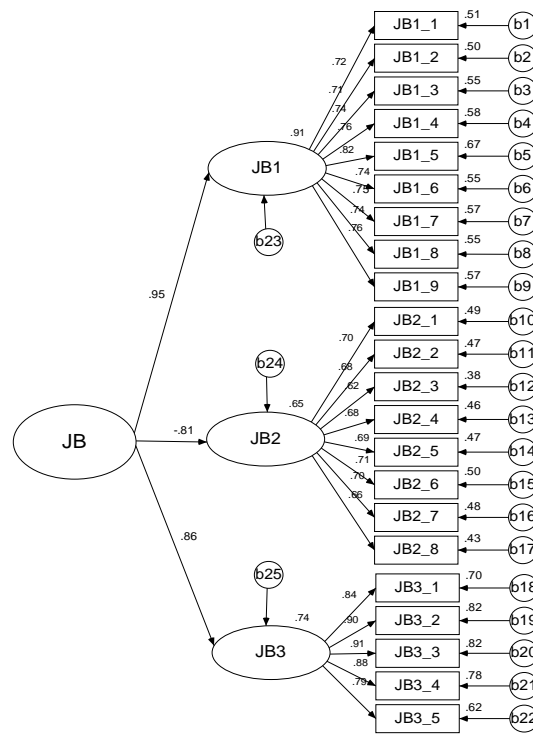
Indicators	Completely Standardized Loadings*	Indicator Reliability	Error Variance
Emotional Exhaustion			
Ex-1	.72	.51	.49
Ex-2	.71	.50	.50
Ex-3	.74	.55	.45
Ex-4	.76	.58	.42
Ex-5	.82	.67	.33
Ex-6	.74	.55	.45
Ex-7	.75	.57	.43
Ex-8	.74	.55	.45
Ex-9	.76	.57	.43
Personal Accomplishment			
A-1	.70	.49	.51
A-2	.66	.47	.53
A-3	.62	.38	.62
A-4	.68	.46	.54
A-5	.69	.47	.53
A-6	.71	.50	.50
A-7	.70	.48	.52
A-8	.66	.43	.57
Depersonalization			
D-1	.84	.70	.30
D-2	.90	.82	.18
D-3	.91	.82	.18
D-4	.88	.78	.22
D-5	.79	.62	.38

Note. *All t -values were significant at $p < .05$.

Table 4.20.

Goodness-of-fit indexes for the measurement model of JB

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Measurement Model	398.43	206	1.93	.046	.923	.058	.906	.937	.968

**Figure 4.3.** The second-order model for JB.

4.4.3 CFA for Organizational Commitment

The original measurement model of organizational commitment was a three-factor model comprised of 18 indicators. The initial measurement estimation of OC model fitted well. The relative chi-square value ($\chi^2/d.f.$) was 1.71, much smaller than the suggested critical value 5, representing a good fit. The other fit statistics also indicated that the model fit the actual data perfectly (RMSEA = .040; RMR = .027; GFI = .95; AGFI = .93; CFI = .98; NFI = .95).

In addition, according to the recommendation of the modification index, no error of the indicators in the current study was highly correlated. Thus, the organizational commitment measurement model in the current study needed not to modify any more. Table 4.21 and 4.22 provide the final results of confirmatory factor analysis for the organizational commitment. The final CFA for the organizational commitment model had 18 indicators just as the original measurement. Therefore, these 18 indicators model was determined as the final measurement model for organizational commitment, which is depicted in Figure 4.4.

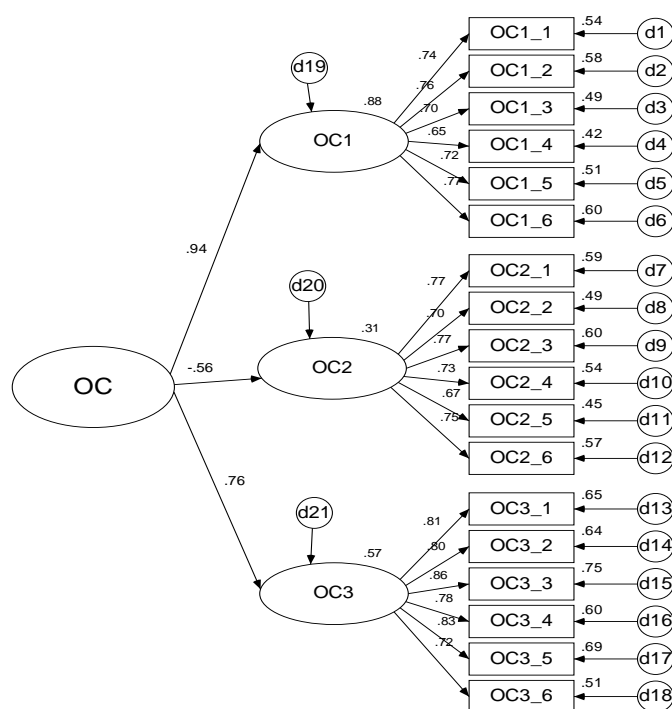


Figure 4.4. The second-order model for OC.

Table 4.21.

Goodness-of-fit indexes for the measurement model of OC

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Measurement Model of OC	225.05	132	1.70	.040	.945	.027	.929	.949	.978

Table 4.22.Measurement scale properties for OC ($N = 435$)

Indicators	Completely Standardized Loadings*	Indicator Reliability	Error Variance
Affective Commitment			
AC1	.74	.54	.46
AC2	.76	.58	.42
AC3	.70	.49	.51
AC4	.65	.42	.58
AC5	.72	.51	.49
AC6	.77	.60	.40
Continuance Commitment			
CC1	.77	.59	.41
CC2	.70	.49	.51
CC3	.77	.60	.40
CC4	.73	.54	.46
CC5	.67	.45	.55
CC6	.75	.57	.43
Normative Commitment			
NC1	.81	.65	.35
NC2	.80	.64	.36
NC3	.86	.75	.25
NC4	.78	.60	.40
NC5	.83	.69	.31
NC6	.72	.51	.49

Note. *All t -values were significant at $p < .05$.

4.4.4 CFA for Overall Measurement Model, and Test of Reliability and Validity

An overall measurement model was estimated using the maximum likelihood method (see Figure 4.5). The goodness of fit for overall measurement model was described in Table 4.23. The relative chi-square value ($\chi^2/\text{d.f.}$) was 1.55, much smaller than the suggested critical value 5. The other fit statistics also indicated that the model fit well the actual data (RMSEA = 0.036; RMR = .063; GFI = 0.836; AGFI = 0.823; NFI = .858, CFI = 0.944). Therefore, the overall model was accepted.

The quality of the reflective measurement model is determined by (1) content validity (2) indicator reliability, (3) construct reliability and (4) construct validity (Bagozzi, 1979).

In view of all items of the questionnaire derived from the mature scales, the corresponding translation to the items derived from previous research with Chinese sample, thus evidence of content validity for the current research was provided.

As for indicator reliability in the model tested, all loadings should be significant at the $p < 0.05$ level and be above the recommended 0.7 parameter value (Carmines & Zeller, 1979). All indicator loadings under 0.4 parameter value should be excluded beforehand (Hulland, 1999).

Construct reliability demands that indicators which are related to the same construct should have a close correlation to each other (Fornell & Larcker, 1981). Construct reliability was tested using composite reliability (CR) and average variance extracted (AVE). Composite reliability is a measure of the internal consistency of the construct indicators, representing the degree to which they indicate the common latent construct. A commonly used threshold value for acceptable reliability is .70 (Bagozzi & Yi, 1988). Another measure

of construct reliability is the average variance extracted measure. AVE measures can be defined as the amount of shared or common variance among the indicators for a construct. Higher values represent a greater degree of shared representation of the indicators with the construct. The average variance extracted value for a construct should exceed .50 (Hair et al., 1995; Fornell & Larcker, 1981). Table 4.23 and 4.24 present the fit statistics for the measurement model, the completely standardized loadings, indicator reliability, error variance, the composite reliability, and AVE. All indicators exceeded the recommended level of 0.70 for indicator reliability. All constructs exceeded the recommended level of .70 for composite reliability, and also exceeded the recommended level of .50 for average variance extracted only except for the construct of Personal Accomplishment with a level of .47 approximating to .50. These results provided evidence of reliability for indicators and constructs in the confirmatory factor analysis.

Table 4.23.

Goodness-of-fit indexes for the overall measurement model

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>RMR</i>	<i>GFI</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Overall Measurement Model	2640.86	1698	1.55	.036	.063	.836	.823	.858	.944

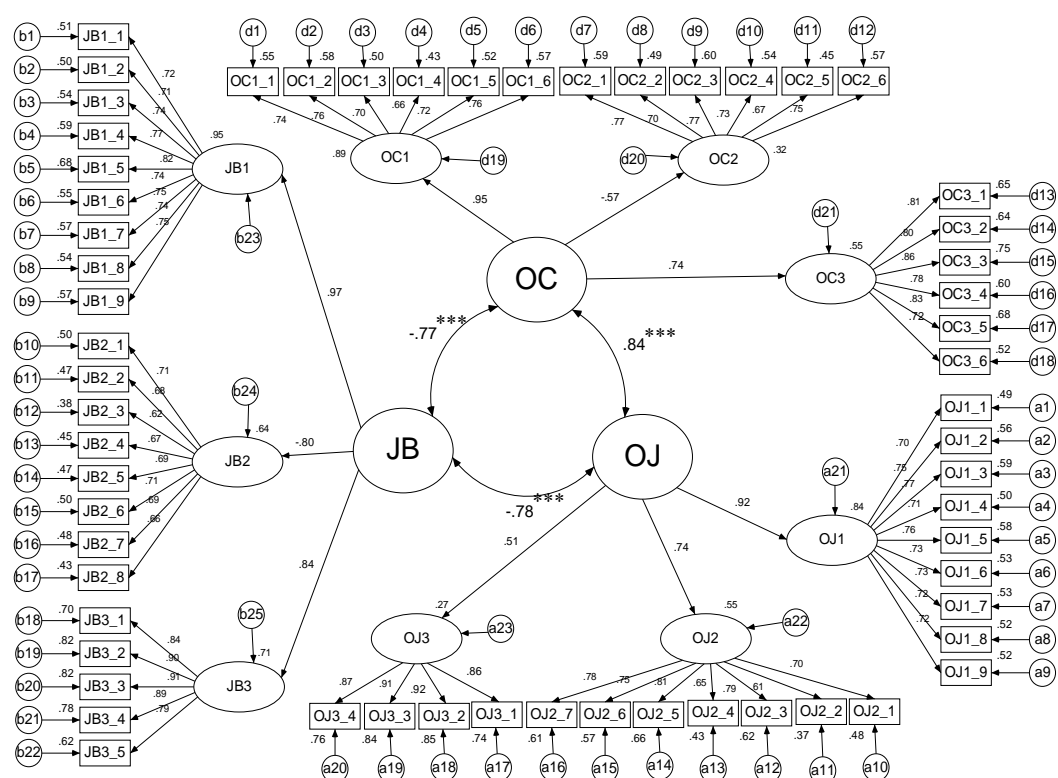


Figure 4.5. The second-order overall measurement model. * $p < .05$, ** $p < .01$, *** $p < .001$. Similarly hereinafter.

Table 4.24.Overall measurement scale properties ($N = 435$)

Constructs and Indicators	Completely Standardized Loadings* (<i>t</i> -values)	Indicator Reliability	Error Variance	Composite Reliability (CR)	Average Variance Extracted (AVE)
Job Burnout				.97	.57
Emotion Exhaustion				.92	.56
JB1	.72 (14.75)	.51	.49		
JB2	.71 (14.54)	.50	.50		
JB3	.74 (15.05)	.54	.46		
JB4	.77 (15.67)	.59	.41		
JB5	.82 (16.70)	.68	.32		
JB6	.74 (15.03)	.55	.45		
JB7	.75 (15.38)	.57	.43		
JB8	.74 (15.00)	.54	.46		
JB9	.76 (15.35)	.57	.43		
Personal Accomplishment				.87	0.47
JB10	.71 (12.63)	.50	.50		
JB11	.68 (12.28)	.47	.53		
JB12	.62 (11.40)	.38	.62		
JB13	.67 (12.24)	.45	.55		
JB14	.69 (12.42)	.47	.53		
JB15	.70 (12.70)	.50	.50		
JB16	.69 (12.62)	.48	.52		
JB17	.66 (12.07)	.43	.57		

Note. * All *t*-values were significant at $p < .05$.

Table 4.24. (continued)

Constructs and Indicators	Completely Standardized Loadings* (<i>t</i> -values)	Indicator Reliability	Error Variance	Composite Reliability (CR)	Average Variance Extracted (AVE)
Depersonalization				.94	.75
JB18	.84 (19.71)	.70	.30		
JB19	.90 (21.79)	.82	.18		
JB20	.91 (22.06)	.82	.18		
JB21	.89 (21.23)	.78	.22		
JB22	.79 (17.66)	.62	.38		
Organizational Justice				.96	0.58
Procedural Justice				.88	.52
OJ1	.70 (13.82)	.48	.52		
OJ2	.61 (12.04)	.37	.63		
OJ3	.79 (14.87)	.62	.38		
OJ4	.65 (12.62)	.43	.57		
OJ5	.81 (15.13)	.66	.34		
OJ6	.75 (14.42)	.57	.43		
OJ7	.78 (14.95)	.61	.40		
Distributive Justice				.93	.77
OJ8	.86 (24.01)	.74	.26		
OJ9	.92 (27.60)	.85	.15		
OJ10	.91 (27.88)	.84	.16		
OJ11	.87 (24.29)	.76	.24		

Note. * All *t*-values were significant at $p < .05$.

Table 4.24. (continued)

Constructs and Indicators	Completely	Indicator	Error	Composite	Average
	Standardized	Reliability	Variance	Reliability	Variance
	Loadings*			(CR)	Extracted
	(<i>t</i> -values)				(AVE)
Interpersonal Justice				.91	.53
OJ12	.70 (13.73)	.49	.51		
OJ13	.75 (14.81)	.56	.44		
OJ14	.77 (15.15)	.59	.41		
OJ15	.77 (13.90)	.50	.50		
OJ16	.76 (15.10)	.58	.42		
OJ17	.73 (14.39)	.53	.47		
OJ18	.73 (14.35)	.53	.47		
OJ19	.72 (14.12)	.52	.48		
OJ20	.72 (14.21)	.52	.48		
Organizational Commitment				0.96	.57
Affective Commitment				.87	.52
OC1	.74 (15.04)	.55	.45		
OC2	.76 (15.63)	.58	.42		
OC3	.70 (14.44)	.50	.50		
OC4	.66 (13.32)	.43	.57		
OC5	.72(14.63)	.52	.48		
OC6	.76 (15.54)	.57	.43		

Note. * All *t*-values were significant at $p < .05$.

Table 4.24. (continued)

Constructs and Indicators	Completely	Indicator	Error	Composite	Average
Continuance Commitment				.85	.54
OC7	.77 (15.84)	.59	.41		
OC8	.70 (14.48)	.49	.51		
OC9	.77 (15.95)	.60	.40		
OC10	.73 (14.78)	.54	.46		
OC11	.67 (13.58)	.45	.55		
OC12	.75 (16.08)	.57	.43		
Normative Commitment				.92	.64
OC13	.81 (16.20)	.65	.35		
OC14	.80 (16.10)	.64	.36		
OC15	.86 (27.32)	.75	.25		
OC16	.78 (15.77)	.60	.40		
OC17	.83 (26.86)	.68	.32		
OC18	.72 (14.02)	.52	.48		

Note. * All *t*-values were significant at $p < .05$.

Convergent validity is assessed by reviewing the *t* tests for the factor loadings (Anderson & Gerbing, 1988). According to Anderson and Gerbing (1988), convergent validity can be assessed from the measurement model by determining whether each indicator's estimated pattern coefficient on its posited underlying construct factor is significant. The factor loadings and *t*-values are presented in Table 4.23. The results indicated that all the *t*-values were statistically significant. Therefore, the results provide evidence of convergent validity for construct.

Discriminant validity is the extent to which different instruments diverge

in their different constructs. Fornell and Larcker (1981), and Hulland (1999) suggested that discriminant validity can be assessed by determining whether the AVE for each construct is higher than the square of the correlation between any pair of single constructs. Table 4.25 showed the average variance extracted estimates. The AVE (between .47 and .77) for dimensions of job burnout, organizational justice and organizational commitment were all higher than the square of the correlation between any pair of single constructs, showing a good discriminant validity for construct.

Table 4.25.

The AVE and the square of the correlation between single constructs

	<i>PJ</i>	<i>DJ</i>	<i>IJ</i>	<i>EE</i>	<i>PA</i>	<i>DE</i>	<i>AC</i>	<i>CC</i>	<i>NC</i>
<i>PJ</i>	.52								
<i>DJ</i>	.12	.77							
<i>IJ</i>	.12	.14	.53						
<i>EE</i>	.06	.18	.28	.56					
<i>PA</i>	.02	.10	.23	.26	.47				
<i>DP</i>	.01	.12	.12	.27	.24	.75			
<i>AC</i>	.07	.18	.15	.18	.11	.17	.64		
<i>CC</i>	.05	.10	.14	.17	.10	.13	.14	.54	
<i>NC</i>	.07	.08	.04	.12	.21	.15	.11	.20	.52

Note. The AVEs are reported along the diagonal with figures in bold, and the Squares of the Correlations between single constructs are below diagonal. *PJ* = Procedural Justice; *DJ* = Distributive Justice; *IJ* = Interactional Justice; *EE* = Emotional Exhaustion; *PA* = Personal Accomplishment; *DP* = Depersonalization; *AC* = Affective Commitment; *CC* = Continuance Commitment; *NC* = Normative Commitment.

4.5 STRUCTURAL MODEL

The structural model depicts the links among the latent variables. It specifies which latent variables directly or indirectly influence changes in the values of other latent variables in the model (Byrne, 1998).

4.5.1 The Influence of Organizational Justice on Academic Performance

4.5.1.1 *Hypotheses on the Relationship between Organizational Justice and Academic Performance*

Organizational justice focuses on individuals' perception of fairness and is considered to be one of the core values that organizations covet (Reithel et al., 2007). It describes the individual's or group's perception of fair treatment received from an organization and their behavioral reactions to such perception (Greenberg, 1993a). Organizational justice is typically conceptualized with three components: distributive, procedural, and interactional justice (Cropanzano et al., 2001; Masterson et al., 2000; McDowall & Fletcher, 2004). Increasing attention has been paid in recent years to the issue of organizational justice and its impacts on organizational outcomes. It has shown to be associated with several outcomes such as job satisfaction, work motivation (Cropanzano et al., 2001; Suliman, 2007), job performance (Suliman, 2007), organizational commitment (Folger & Konovsky, 1989). Performance refers to the quantity and quality of work. Job performance is the degree to which employees are carrying out their jobs in a given work setting (Suliman, 2007). Cohen-Church & Spector (2001) introduced a model of antecedents and consequences of organizational justice (see Figure 2.2). According to this model, consequences of organizational justice were classified into four

categories: Performance, Extra-role behaviors, Counterproductive Behaviors and withdrawal, Attitudinal and affective reactions.

Perception of distributive justice is based largely on comparisons with others (Greenberg, 1987). The result of comparison (negative or positive) is strongly associated with the employee's perception of justice. If the result is negative, they may wish to challenge the system that has given rise to this state of affairs (Suliman, 2007). Moreover, according to Folger and Cropanzano (1998), a number of potentially adverse behavioral reactions may follow from this perception such as reduced job performance, embarking on the use of withdrawal behavior such as absenteeism, turnover, and reduced cooperation. Elamin and Alomaim (2011) reported that perception of distributive justice was found to be the best positive predictor of performance followed by interactional justice, the perception of procedural justice showed a negative effect on it.

In fact, in terms of the effects of organizational justice' dimensions on job performance, a number of studies found inconsistent results with the above findings of Elamin and Alomaim (2011). According to Masterson et al. (2000), procedural justice was positively related to job performance, and the more fairly employer treated employees, the higher performance employees created to pay back. Meta-analytic reviews have yielded a moderately strong positive relationship between procedural justice and task performance (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). For example, Cohen-Charash and Spector (2001, p. 304) asserted that "results from field studies show that job performance is strongly related to procedural justice, but hardly to distributive and interactional justice." Similarly, Zapata-Phelan, Colquitt, Scott, and Livingston (2009) found that while procedural justice predicted task performance, interactional justice was not significantly related to it.

However, not in line with Cohen-Charash and Spector (2001), based on

the data from 211 employees across nine organizations from the private and public sectors in a developing country in the Caribbean, Devonish and Greenidg (2010) found that all three justice dimensions had significant positively effects on task performance and contextual performance. Wang et al. (2010) developed a model to examine the mediating role played by organizational commitment in linking organizational justice and job performance. The data were collected from 793 completed questionnaires sampling employees from industries across China. They found that the relationship of organizational justice to job performance was mostly mediated by organizational commitment. Additionally, among the three kinds of organizational justice, in line with Devonish and Greenidg (2010), all three justice dimensions had significant positively effects on performance, and interactional justice was the best predictor of performance.

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-5: University teachers' organizational justice positively affects academic performance.

In view of organizational justice is multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-5a: University teachers' interactional justice positively affects academic performance.

H(III)-5b: University teachers' procedural justice positively affects academic performance.

H(III)-5c: University teachers' distributive justice positively affects academic performance.

4.5.1.2 *The Influence of Overall Organizational Justice on Academic Performance*

According to the above hypothesis H(III)-5, applying the data from the formal investigation, the current study developed a structural model for the influence of overall organizational justice on academic performance variables. Figure 4.6 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.26.

According to results of CFA, the goodness-of-fit indexes supported the structure model of overall organizational justice on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 2.140; the RMSEA was 0.051; the RMR was .044; the GFI was .905; the AGFI was .882; the NFI was .907; the CFI was 0.948 (see Table 4.26).

Table 4.26.

Goodness-of-fit indexes for the structure model of overall OJ's effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of overall OJ on academic performance variables	601.28	281	2.14	.051	.905	.044	.882	.907	.948

In view of the supposed structure model of overall organizational justice's effect on academic performance variables was fit well the data, therefore, H(□)-5: university teachers' organizational justice positively affects academic performance, was supported by and large except for one variable (i.e., book) in

the current study.

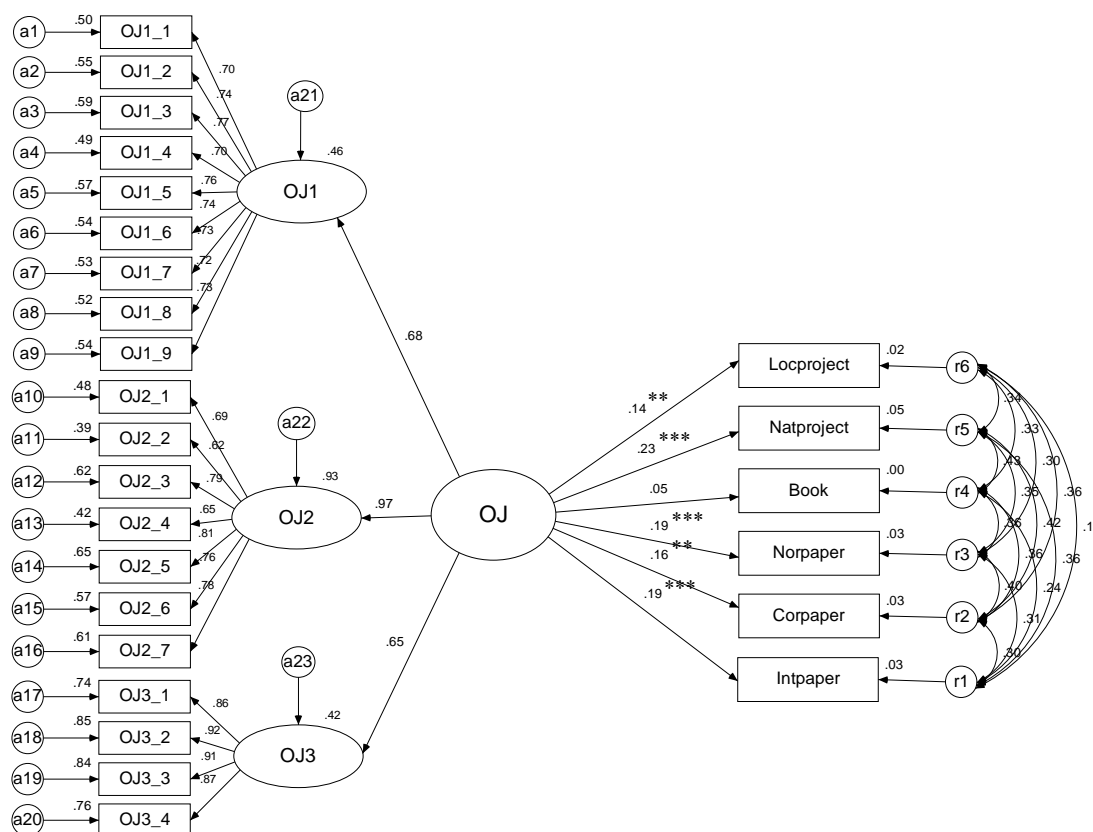


Figure 4.6. The structure model of overall OJ's effect on academic performance variables.

4.5.1.3 *The Influence of Organizational Justice's Dimensions on Academic Performance*

According to the above hypotheses H(III)-5a, 5b, 5c, applying the data from the formal investigation, the current study structured a model for the influence of organizational justice's dimensions on academic performance variables. Figure 4.7 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.27.

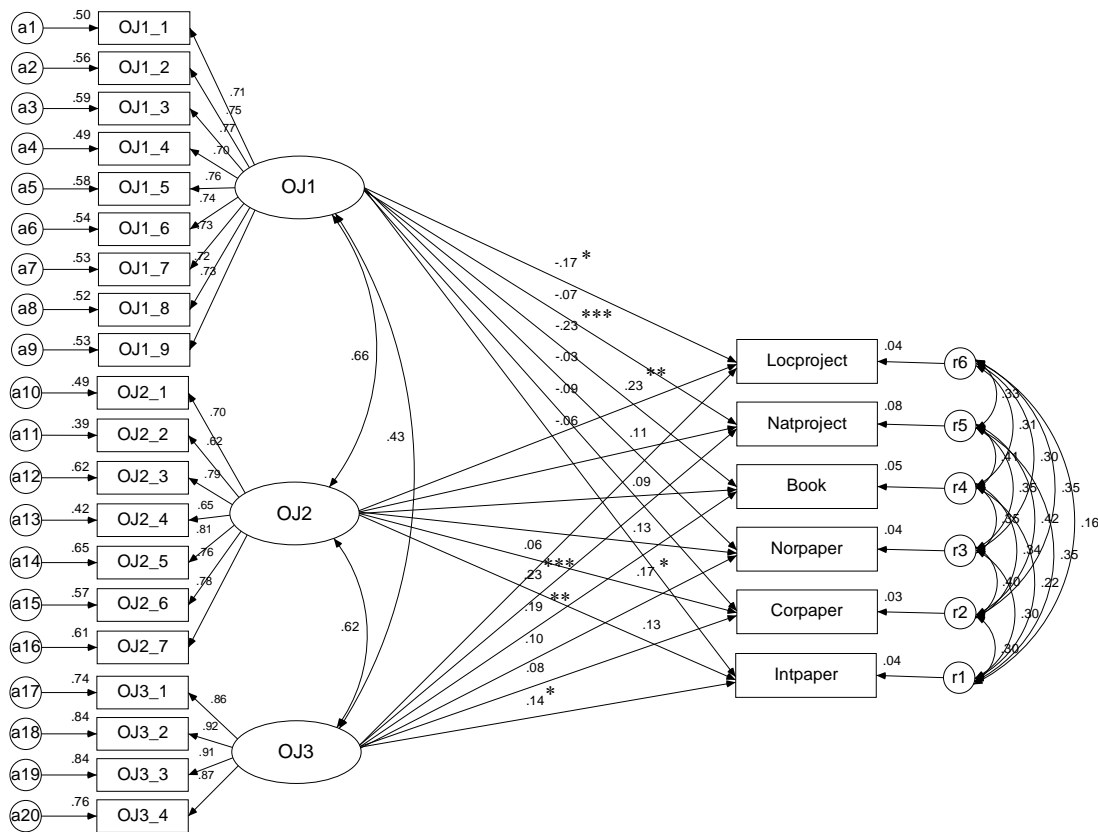


Figure 4.7. The structure model of OJ's dimensions' effect on academic performance variables.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's dimensions' effect on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 2.120; the RMSEA was 0.051; the RMR was .040; the GFI was .910; the AGFI was .883; the NFI was .912; the CFI was 0.951 (see Table 4.27).

Table 4.27.

Goodness-of-fit indexes for the structure model of OJ's dimensions' effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of OJ's dimensions on academic performance variables	570.30	269	2.12	.051	.910	.040	.883	.912	.951

In view of the supposed structure model of organizational justice's dimensions' effect on academic performance variables was fit well the data, therefore, two hypotheses, i.e., H(III)-5b: university teachers' procedural justice positively affects academic performance, and H(III)-5c: university teachers' distributive justice positively affects academic performance, were partly supported because only a part of path coefficients were positive, and the rest were not significant. While H(III)-5a: university teachers' interactional justice positively affect academic performance, was not supported in the current study because path coefficients were either significantly negative or insignificant path coefficients in the current study, rather than significantly positive.

4.5.2 The Influence of Job Burnout on Academic Performance

4.5.2.1 *Hypotheses on the Relationship between Job Burnout and Academic Performance*

Prior research has showed that performance in organizations related not only to organizational justice, but also to job burnout, organizational commitment, and other organizational outcomes. As mentioned before in the current study,

burnout has been linked to several negative organizational outcomes, including increased turnover and absenteeism (Jackson et al., 1986; Parker & Kulik, 1995), lower organizational commitment (Maslach & Leiter, 1997). Cordes and Dougherty (1993) pointed out that burnout is related to low performance. When individual lacks or has no motivation to work but has to do his or her job, he or she will be bored with it, will feel exhaustion of body and mind, and thus has a reduced performance. A great deal of evidence supported their suggestions. For example, in Iran, Ashtari, Farhady, and Khodaei (2009) sampled 100 mental health professionals, and found that there was a significant correlation between job burnout and job performance. Chang (2010) investigated the connection of employees, job demands and burnout to their job performance in Taiwan TFT-LCD companies, and the results indicated that burnout negatively affected job performance. In Korea, Kwag and Kim (2009) also indicated that job burnout was related to lower levels of job performance. In China, Cai and He (2010) introduced three variables, job burnout, organizational commitment and job performance into the hotel industry, and found that job burnout negatively and directly affected organizational commitment and job performance. Meanwhile, job burnout influenced job performance through organizational commitment.

Shirom (2003) argued that burnout was differentially related to self-assessed, supervisor-assessed, and objectively measured job performance. In general, burnout was found to be negatively related to subjectively assessed performance but not significantly associated with objectively assessed performance. Based on six studies, Schaufeli and Enzmann (1998) concluded that self-rated performance correlated weakly with the MBI emotional exhaustion scale, with only about 5% of the variance shared. In comparison, other-rated performance in seven studies was found to share only 1% of the variance with the MBI emotional exhaustion scale, and the expected negative

correlations were found in only four out of seven studies. To illustrate, Parker and Kulik (1995) reported that, after controlling for negative affectivity, nurses who were higher in their feeling of emotional exhaustion was rated lower performance both by the nurses themselves and independently by their supervisors. However, Parker and Kulik (1995) failed to find relationships among performance and the two other MBI-derived scales, depersonalization and reduced personal accomplishment, thus lending support to the pivotal importance of emotional exhaustion in the burnout experience. Similar results were found by Wright and Bonnett (1997), and Wright and Cropanzano (1999).

Shirom (2003) suggested that the negative correlation between burnout and job performance is likely to be explained by burned-out individuals' impaired coping ability and their reduced level of motivation to perform.

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-6: University teachers' job burnout negatively affects academic performance.

In view of job burnout is multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-6a: University teachers' emotional exhaustion negatively affects academic performance.

H(III)-6b: University teachers' personal accomplishment positively affects academic performance.

H(III)-6c: University teachers' depersonalization negatively affects academic performance.

4.5.2.2 *The Influence of Overall Job Burnout on Academic Performance*

According to the above hypothesis H(III)-6, applying the data from the formal investigation, the current study structured a model for the influence of overall job burnout on academic performance variables. Figure 4.8 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.28.

According to results of CFA, the goodness-of-fit indexes supported the structure model of overall JB's effect on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.565; the RMSEA was 0.036; the RMR was .049; the GFI was .922; the AGFI was .804; the NFI was .926; the CFI was 0.972 (see Table 4.28).

Table 4.28.

Goodness-of-fit indexes for the structure model of overall JB's effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of overall JB on academic performance variables	519.64	332	1.57	.036	.922	.049	.904	.926	.972

In view of the supposed structure model of overall job burnout's effect on academic performance variables was fit well the data, therefore, H(III)-6, i.e., university teachers' job burnout negatively affects academic performance, was partly supported because only one path coefficient showed be significant, while all the rest were not.

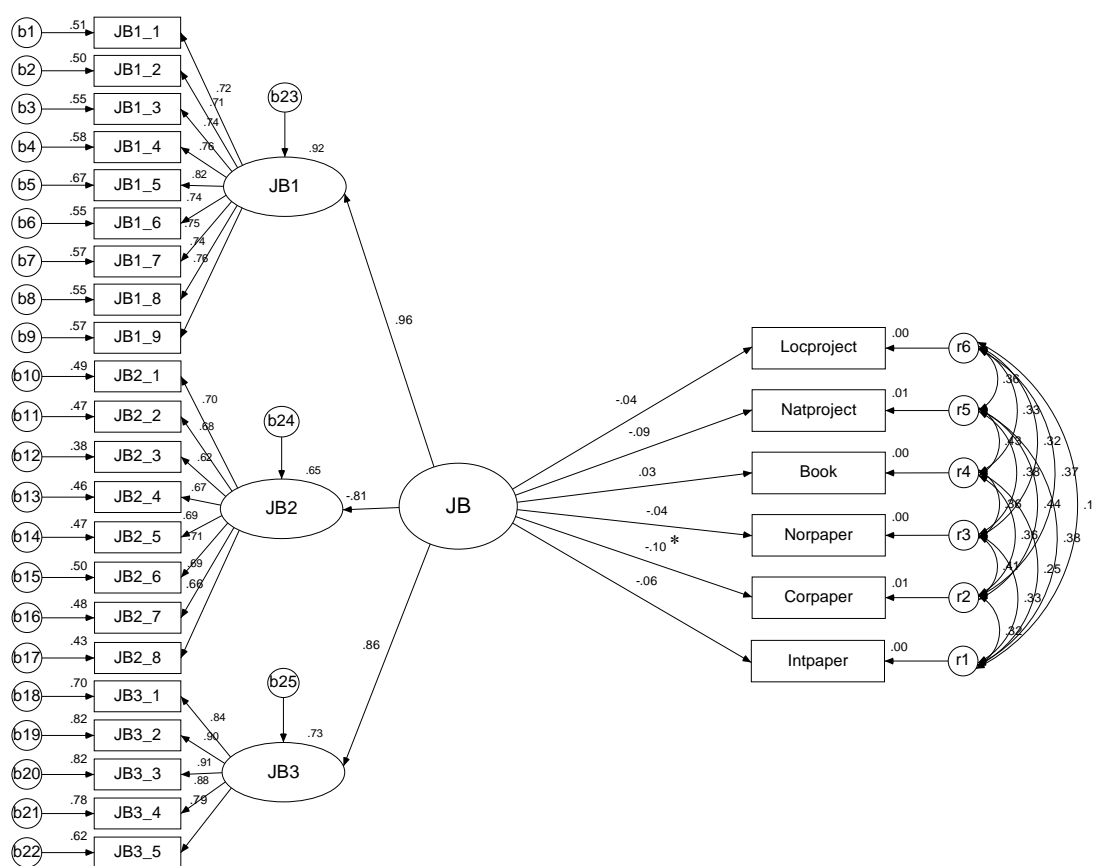


Figure 4.8. The structure model of overall JB's effect on academic performance variables.

4.5.2.3 *The Influence of Job Burnout's Dimensions on Academic Performance*

According to the above hypotheses H(III)-6a, 6b, 6c, applying the data from the formal investigation, the current study structured a model for the influence of job burnout's dimensions on academic performance variables. Figure 4.9 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.29.

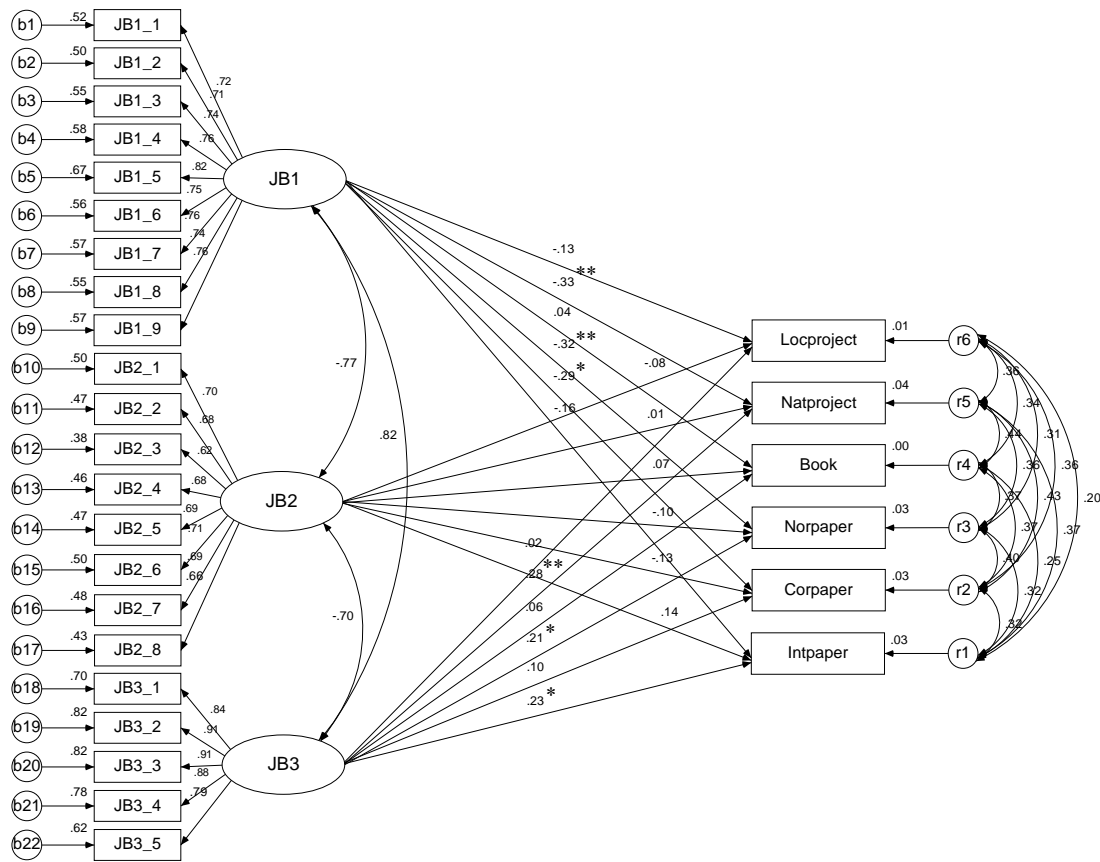


Figure 4.9. The structure model of JB's dimensions' effect on academic performance variables.

According to results of CFA, the goodness-of-fit indexes supported the structure model of JB's dimensions' effect on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.544; the RMSEA was 0.035; the RMR was .047; the GFI was .925; the AGFI was .905; the NFI was .929; the CFI was 0.974 (see Table 4.29).

Table 4.29.

Goodness-of-fit indexes for the structure model of JB' dimensions' effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of JB's dimensions on academic performance variables	494.23	320	1.54	.035	.925	.047	.905	.929	.974

In view of the supposed structure model of job burnout's dimensions' effect on academic performance variables was fit well the data, therefore, one hypothesis, i.e., H(III)-6a: university teachers' emotional exhaustion negatively affects academic performance, was partly supported because only a part of path coefficients were positive, and the rest were not significant. While, H(III)-6c: university teachers' depersonalization negatively affects academic performance, was not supported because, indeed, a part of path coefficients were significant, however, not negative. For H(III)-6b: university teachers' personal accomplishment positively affects academic performance, was also not supported in the current study because of no significant path coefficients.

4.5.3 The Influence of Organizational Commitment on Academic Performance

4.5.3.1 *Hypotheses on the Relationship between Organizational Commitment and Academic Performance*

Performance has also been linked to organizational commitment. Steers (1977) introduced a cause and effect model of organizational commitment which classified antecedents of organizational commitment into three groups:

personal characteristics, work characteristics, work experience, while listed consequences of organizational commitment as follows: desire to remain, attendance, job performance, and so on. Based on the model of Steers (1977), Mowday et al. (1982) developed a more concrete antecedents and consequences model of organizational commitment, wherein, consequences of organizational commitment including performance, absenteeism, turnover, and so on. In terms of the forming process of organizational commitment, Meyer and Allen (1991) introduced a four-phase model: prior factors, course, commitment, consequence. Consequence phase included retention, productive behaviors, and member's welfare. In the model, performance was classified into productive behaviors. Evidence has supported the above model. For example, adopting the questionnaire from Meyer and Allen (1993), in China, Chen and Francesco (2003) sampled 253 subjects including directors and their subordinates, and found that affective commitment was positively correlated with the two factors of job performance, continuance commitment was not related to in-role performance, while normative commitment mediated the relationship between organizational commitment and job performance. Based on investigating university teachers, Lu (2005) and Zhang (2006) found that teachers' organizational commitment was positively correlated with job performance. Similarly, Ding (2010) also found that organizational commitment was positively correlated with job performance; meanwhile organizational commitment mediated the relationship between organizational justice and job performance.

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-7 : University teachers' organizational commitment positively affects academic performance.

In view of organizational commitment is multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-7a: University teachers' affective commitment positively affects academic performance.

H(III)-7b: University teachers' continuance commitment does not affect academic performance.

H(III)-7c: University teachers' normative commitment positively affects academic performance.

4.5.3.2 *The Influence of Overall Organizational Commitment on Academic Performance*

According to the above hypothesis H(III)-7, applying the data from the formal investigation, the current study structured a model for the influence of overall organizational commitment's dimensions on academic performance variables. Figure 4.10 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.30.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's dimensions' effect on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.266; the RMSEA was 0.025; the RMR was .022; the GFI was .946; the AGFI was .931; the NFI was .941; the CFI was 0.987 (see Table 4.30).

Table 4.30.

Goodness-of-fit indexes for the structure model of overall OC's effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of overall OC on academic performance variables	296.36	234	1.27	.025	.946	.022	.931	.941	.987

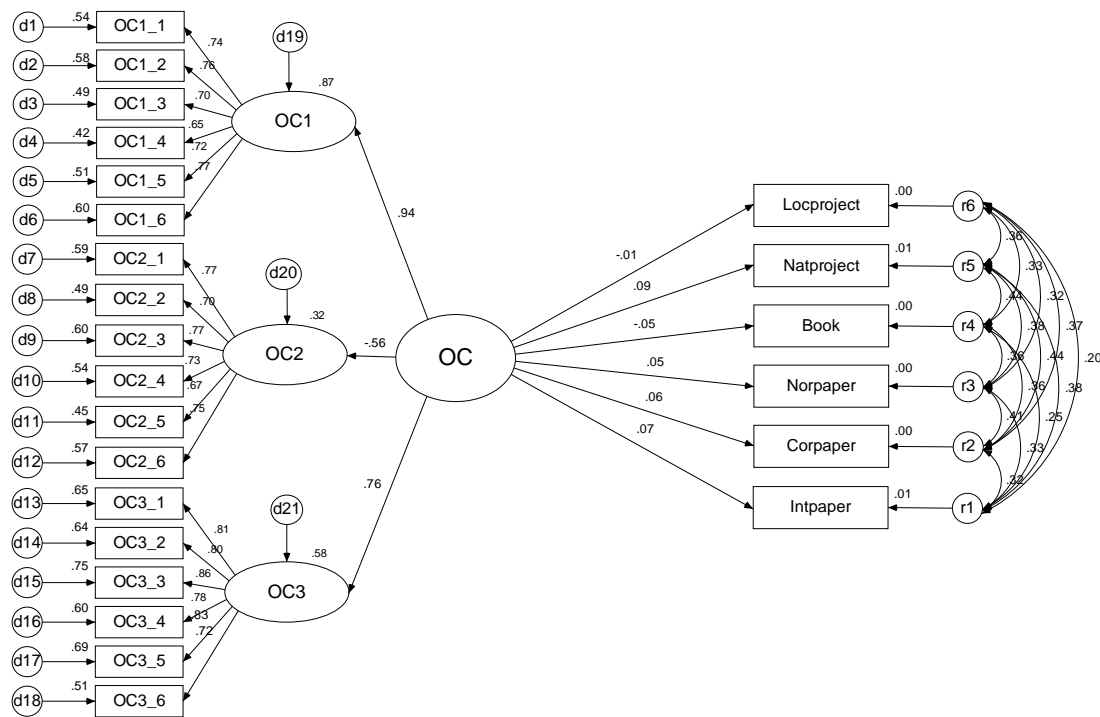


Figure 4.10. The structure model of overall OC's effect on academic performance variables.

In view of the supposed structure model of overall organizational justice's effect on academic performance variables was fit well the data, therefore, $H(\square)$ -7, i.e., university teachers' organizational commitment positively affects

academic performance, was not supported in the current study because of no significant path coefficients.

4.5.3.3 *The Influence of Organizational Commitment's Dimensions on Academic Performance*

According to the above hypotheses H(III)-7a, 7b, 7c, applying the data from the formal investigation, the current study structured a model for the influence of justice's dimensions on academic performance variables. Figure 4.11 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.31.

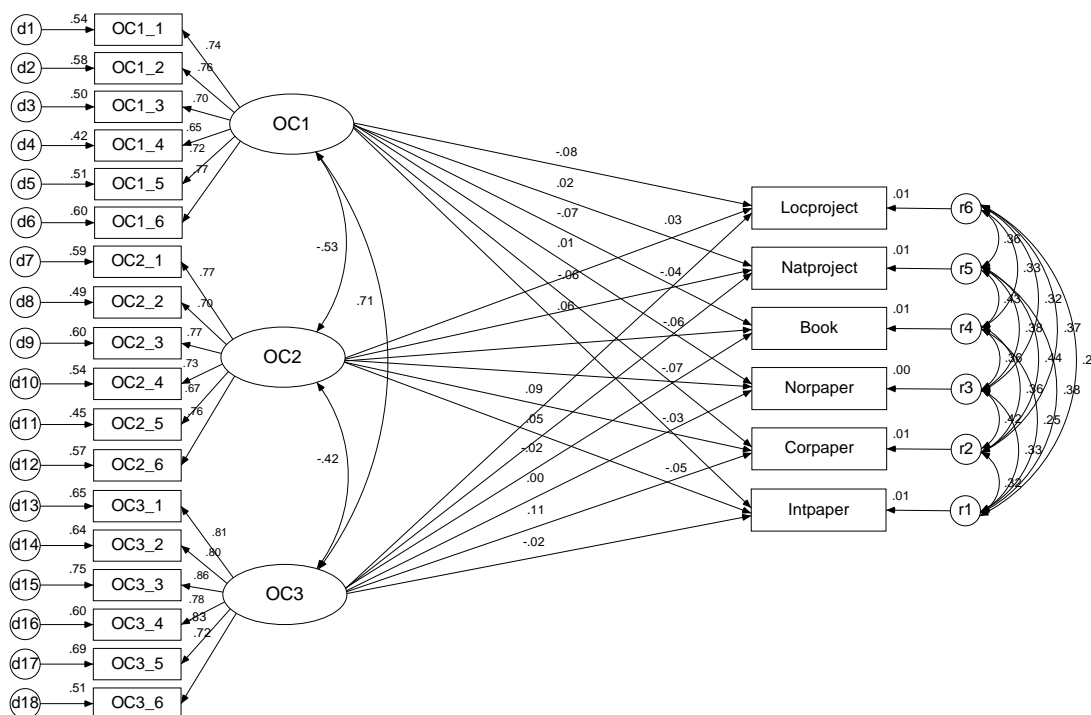


Figure 4.11. The structure model of OC's dimensions' effect on academic performance variables.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's dimensions' effect on academic performance variables. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.305; the RMSEA was 0.027; the RMR was .022; the GFI was .947; the AGFI was .929; the NFI was .942; the CFI was 0.986 (see Table 4.31).

Table 4.31.

Goodness-of-fit indexes for the structure model of OC's dimensions' effect on academic performance variables

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of OC's dimensions on academic performance variables	289.73	222	1.31	.027	.947	.022	.929	.942	.986

In view of the supposed structure model of OC' dimensions' effect on academic performance variables was fit well the data, therefore, all the three hypotheses, i.e., H(III)-7a: university teachers' affective commitment positively affects academic performance, H(III)-7b: university teachers' continuance commitment does not affect academic performance, and H(III)-7c: university teachers' normative commitment positively affects academic performance, were not supported because of no significant path coefficients.

4.5.4 The Influence of Organizational Justice on Job Burnout

4.5.4.1 Hypotheses on the Relationship between Organizational Justice and Job Burnout

In the burnout model of Maslach and Leiter (1997), a serious mismatch

between the person and the job occurs when there is not perceived fairness in the workplace. Fairness communicates respect and confirms people's self-worth. Mutual respect between people is central to a shared sense of community. Unfairness can occur when there is inequity of workload or pay, when there is cheating, or when evaluations and promotions are handled inappropriately. If procedures for grievance or dispute resolution do not allow for both parties to have a voice, then those will be judged as unfair. A lack of fairness exacerbates burnout in at least two ways. First, the experience of unfair treatment is emotionally upsetting and exhausting. Second, unfairness fuels a deep sense of cynicism about the workplace.

Relevant research on procedural justice (e.g., Lawler, 1968; Tyler, 1990) has shown that people are more concerned with the fairness of the process than with the favorableness of the outcomes. Fairness is central to equity theory (Walster et al., 1973), which posits that perceptions of equity or inequity are based on people's determination of the balance between their inputs (i.e., time, effort, and expertise) and outputs (i.e., rewards and recognition). This core notion of inequity is also reflected in the effort–reward imbalance model (Siegrist, 1996). Research based on these theoretical frameworks has found that a lack of reciprocity, or imbalanced social exchange processes, is predictive of burnout (e.g., Bakker, Schaufeli, & Sixma, et al., 2000; Schaufeli, van Dierendonck, & van Gorp, 1996). Fairness has also emerged as a critical factor in administrative leadership (e.g., Laschinger & Leiter, 2006; White, 1987). Employees who perceive their supervisors as being both fair and supportive are less susceptible to burnout (Leiter & Harvie, 1997, 1998).

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-1: University teachers' organizational justice negatively affects job

burnout.

In view of organizational justice and job burnout are all multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-1a1: University teachers' distributive justice negatively affects emotion exhaustion.

H(III)-1a2: University teachers' distributive justice positively affects personal accomplishment.

H(III)-1a3: University teachers' distributive justice negatively affects depersonalization.

H(III)-1b1: University teachers' procedural justice negatively affects emotion exhaustion.

H(III)-1b2: University teachers' procedural justice positively affects personal accomplishment.

H(III)-1b3: University teachers' procedural justice negatively affects depersonalization.

H(III)-1c1: University teachers' interactional justice negatively affects emotion exhaustion..

H(III)-1c2: University teachers' interactional justice positively affects personal accomplishment.

H(III)-1c3: University teachers' interactional justice negatively affects depersonalization.

4.5.4.2 *CFA for the Influence of Overall Organizational Justice on Overall Job Burnout*

According to the above hypothesis H(III)-1, applying the data from the formal investigation, the current study structured a second-order structural model for

the influence of organizational justice on job burnout as a whole. Figure 4.12 presents completely standardized path coefficients with their corresponding significance tests and the goodness of fit for this second-order structural model. The goodness of fit for this model is described in Table 4.32.

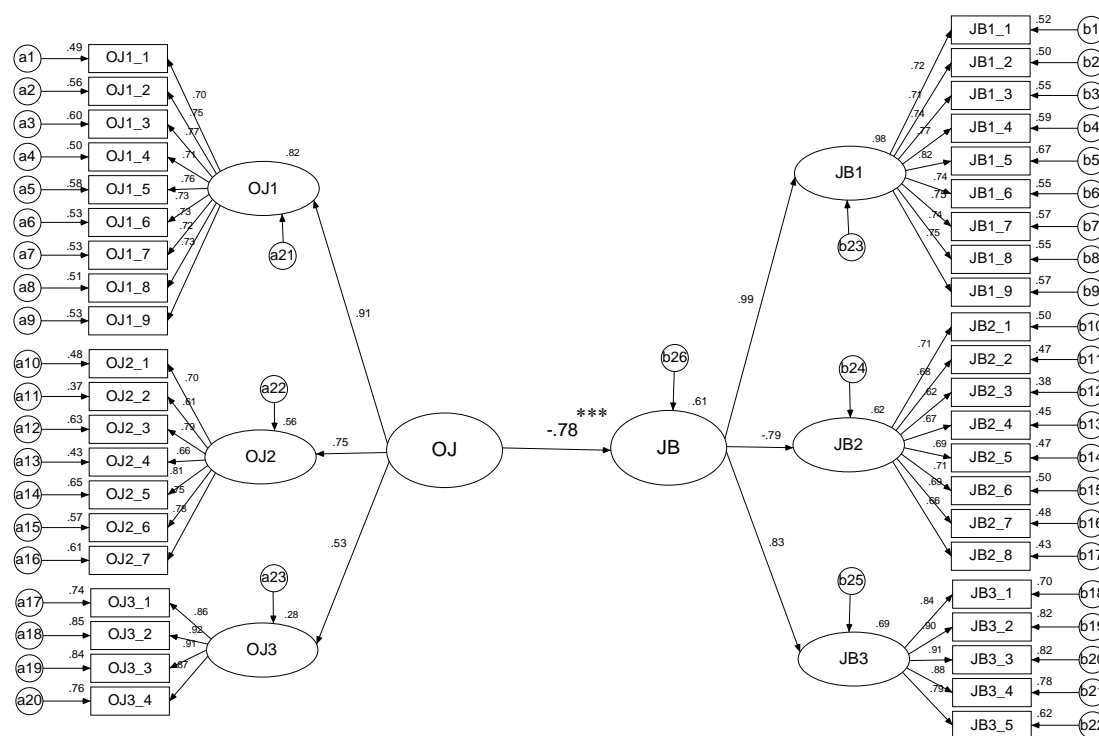


Figure 4.12. The second-order structure model of OJ's effect on JB.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's effect on JB. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.839; the RMSEA was 0.044; the RMR was .077; the GFI was .862; the AGFI was .847; the NFI was .884; the CFI was 0.944 (see Table 4.32).

Table 4.32.

Goodness-of-fit indexes for the second-order structure model of OJ's effect on JB

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of OJ on OC	1493.10	812	1.84	.044	.862	.077	.847	.884	.944

In view of the supposed structure model of OJ's effect on JB was fit well the data, therefore, H(III)-1 : University teachers' organizational justice negatively affects job burnout, was supported in the current study.

4.5.4.3 *CFA for the Influence of Each Dimension of Organizational Justice on Each Dimension of Job Burnout*

According to the above hypotheses H(III)-1a1, 1a2, 1a3, 1b1, 1b2, 1b3, 1c1, 1c2 and 1c3, applying the data from the formal investigation, the current study structured a structural model for the influence of each dimension of organizational justice on each dimension of job burnout. Figure 4.13 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.33.

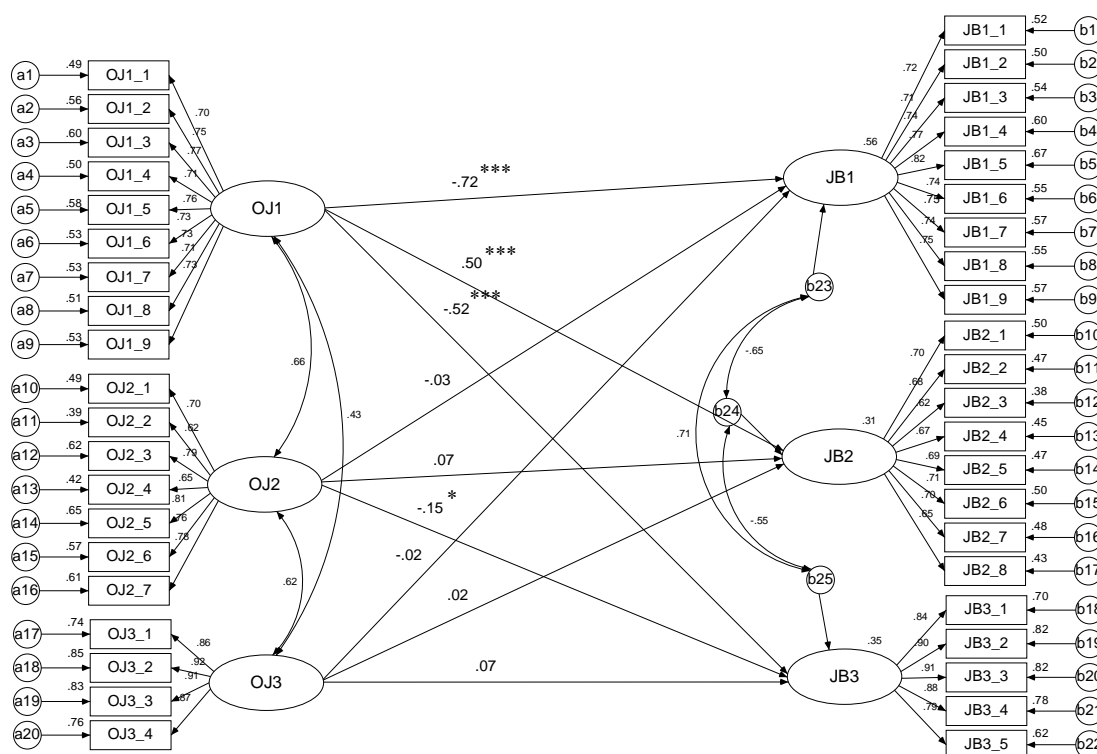


Figure 4.13. The structure model of OJ's dimensions' effect on JB's dimensions.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's dimensions' effect on JB's dimensions. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.748; the RMSEA was 0.042; the RMR was .056; the GFI was .869; the AGFI was .853; the NFI was .89; the CFI was 0.95 (see Table 4.33).

Table 4.33.

Goodness-of-fit indexes for the second-order structure model of OJ's dimensions' effect on JB's dimensions

Model	χ^2	df	χ^2/df	RMSEA	GFI	RMR	AGFI	NFI	CFI
Model of OJ's dimensions on JB's dimensions	1405.02	804	1.75	.042	.869	.056	.853	.891	.950

In view of the supposed structure model of OJ's dimensions' effect on JB's dimensions was fit well the data, therefore, four hypotheses, i.e., H(III)-1b3: university teachers' procedural justice negatively affects depersonalization, H(III)-1c1: university teachers' interactional justice negatively affects emotion exhaustion, H(III)-1c2: university teachers' interactional justice positively affects accomplishment, and H(III)-1c3: university teachers' interactional justice negatively affects depersonalization, were supported in the present study. Whereas, five hypotheses, i.e., H(III)-1a1: university teachers' distributive justice negatively affects emotion exhaustion, H(III)-1a2: university teachers' distributive justice positively affects accomplishment, H(III)-1a3: university teachers' distributive justice negatively affects depersonalization, H(III)-1b1: university teachers' procedural justice negatively affects emotion exhaustion, and H(III)-1b2: university teachers' procedural justice positively affects accomplishment, were not supported because of no significant path coefficients in the current study.

4.5.5 The Influence of Job Burnout on Organizational Commitment

4.5.5.1 *Hypotheses on the Relationship between Job Burnout and Organizational Commitment*

Based on the review of prior research, Gemlik et al. (2010) suggested that it seemed reasonable to postulate that the experience of burnout would lead employees to be less committed to the organization. Organizational commitment may be the mediating variable in the link that has been found between burnout and both turnover and job withdrawal (Jackson et al., 1986). Similarly, burnout may be an important mediating variable between interpersonal aspects of the work environment and organizational commitment.

In order to examine the relationship between burnout and organizational commitment, Gemlik et al. (2010) performed a study with the health sector staff in Turkey, utilizing the Turkish version of Allen and Meyer's Organizational Commitment Questionnaire (1990) and Maslach's MBI (1992). The regression analysis revealed that both emotional exhaustion and depersonalization significantly affected affective and normative commitment, however, these two factors of burnout both had no meaningful descriptive power on continuance commitment. In terms of personal accomplishment, it had meaningful descriptive power on the affective and continuance commitment, however, no relationship was found between personal accomplishment and normative commitment.

Hakanen et al. (2008) found that increased burnout diminishes the level of commitment significantly. Many researchers (Burke & Greenglass, 1995; Lee & Ashforth, 1993) have found the emotional exhaustion to be a strong predictor of job and life satisfaction, absenteeism, commitment, and turnover intention.

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-2: University teachers' job burnout negatively affects organizational commitment.

In view of job burnout and organizational commitment are all multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-2a1: University teachers' emotion exhaustion negatively affects affective commitment.

H(III)-2a2: University teachers' emotion exhaustion positively affects continuance commitment.

H(III)-2a3: University teachers' emotion exhaustion negatively affects normative commitment.

H(III)-2b1: University teachers' accomplishment positively affects affective commitment.

H(III)-2b2: University teachers' accomplishment negatively affects continuance commitment.

H(III)-2b3: University teachers' accomplishment positively affects normative commitment.

H(III)-2c1: University teachers' depersonalization negatively affects affective commitment.

H(III)-2c2: University teachers' depersonalization positively affects continuance commitment.

H(III)-2c3: University teachers' depersonalization negatively affects normative commitment.

4.5.6.2 *CFA for the Influence of Overall Job Burnout on Overall Organizational Commitment*

According to the above hypothesis H(III)-2, applying the data from the formal investigation, the current study structured a second-order structural model for the influence of job burnout on organizational commitment. Figure 4.14 presents completely standardized path coefficients with their corresponding significance tests for this second-order structural model. The goodness of fit for this model is described in Table 4.34.

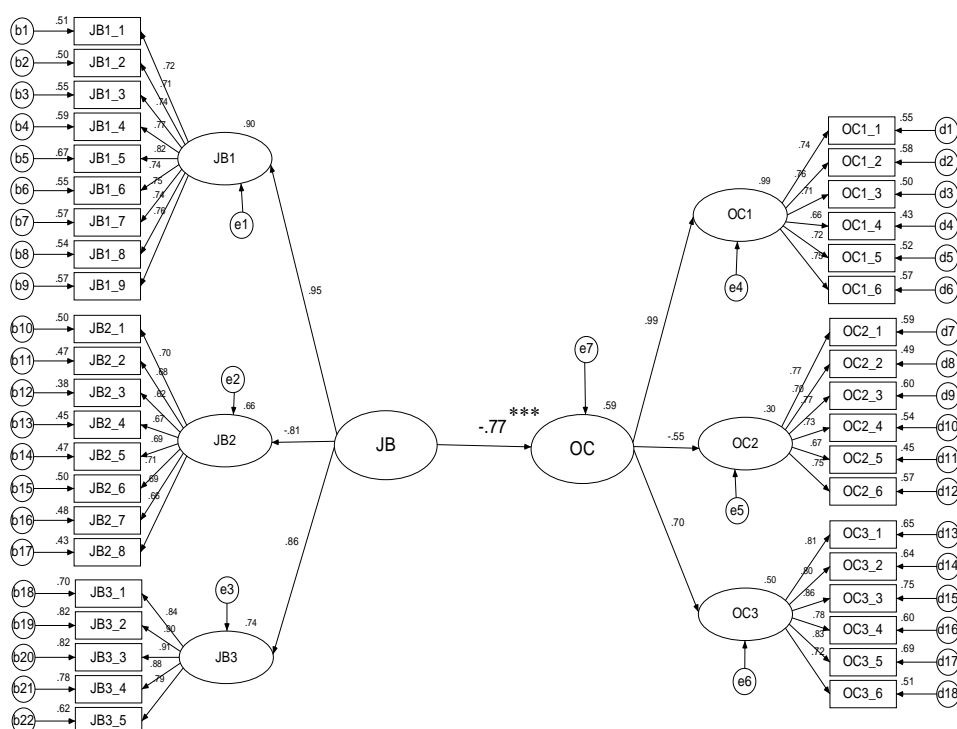


Figure 4.14. The second-order structure model of JB's effect on OC.

According to results of CFA, the goodness-of-fit indexes supported the structure model of JB's effect on OC. All the indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.479; the RMSEA was 0.033; the RMR was 0.51; the GFI was .891; the AGFI was .878; the NFI was .905; the CFI was 0.967 (see Table 4.34).

Table 4.34.

Goodness-of-fit indexes for the second-order structure model of JB's effect on OC

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of JB on OC	1081.19	733	1.48	.033	.891	.051	.878	.905	.967

In view of the supposed structure model of JB's effect on OC was fit well

the data, therefore, H(III)-2: university teachers' job burnout negatively affects organizational commitment, was supported in the current study.

4.5.5.3 CFA for the Influence of Each Dimension of Job Burnout on Each Dimension of Organizational Commitment

According to the above hypotheses H(III)-2a1, 2a2, 2a3, 2b1, 2b2, 2b3, 2c1, 2c2 and 2c3, applying the data from the formal investigation, the current study structured a structural model for the influence of each dimension of job out on each dimension of organizational commitment. Figure 4.15 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.35.

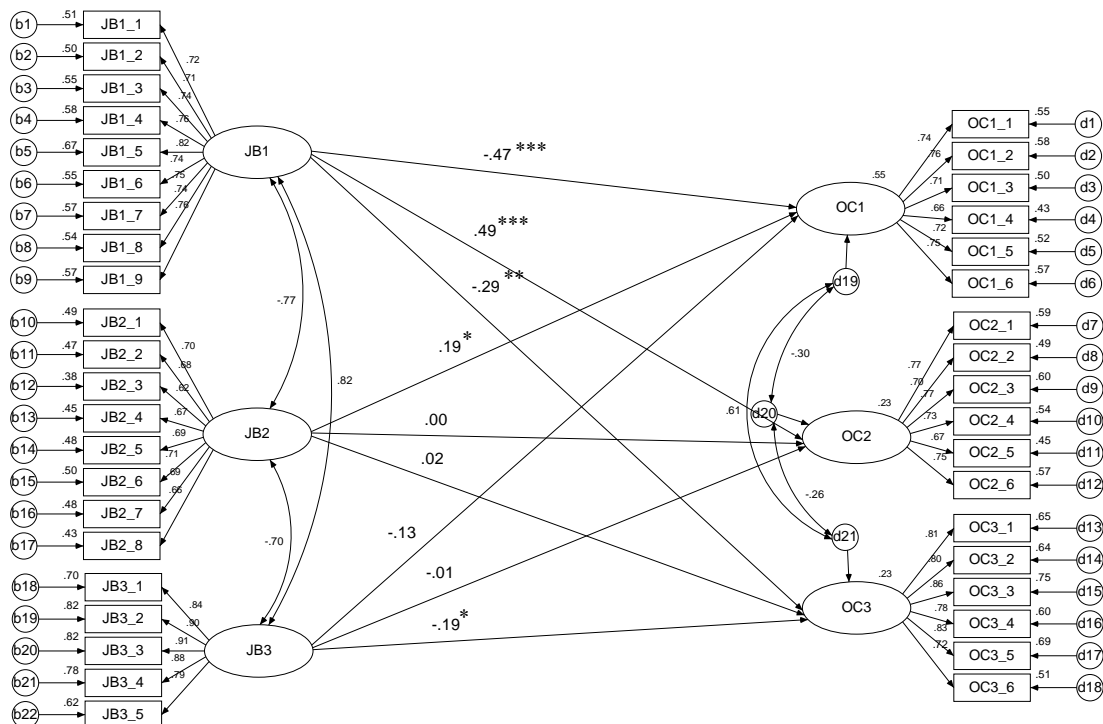


Figure 4.15. The structure model of JB's dimensions' effect on OC's dimensions.

According to results of CFA, the goodness-of-fit indexes supported the structure model of OJ's dimensions' effect on JB's dimensions. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.471; the RMSEA was 0.033; the RMR was .047; the GFI was .893; the AGFI was .879; the NFI was .907; the CFI was 0.968 (see Table 4.35).

Table 4.35.

Goodness-of-fit indexes for the second-order structure model of JB's dimensions' effect on OC's dimensions

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of JB's dimensions on OC's dimensions	1066.22	725	1.47	.033	.893	.047	.879	.907	.968

In view of the supposed structure model of JB's dimensions' effect on OC's dimensions was fit well the data, therefore, five propositions, i.e., H(III)-2a1: university teachers' emotion exhaustion negatively affects affective commitment, H(III)-2a2: university teachers' emotion exhaustion positively affects continuance commitment, H(III)-2a3: university teachers' emotion exhaustion negatively affects normative commitment, H(III)-2b1: university teachers' accomplishment positively affects affective commitment, and H(III)-2c3: university teachers' depersonalization negatively affects normative commitment, were supported. However, four propositions, i.e., H(III)-2b2: university teachers' accomplishment negatively affects continuance commitment, H(III)-2b3: university teachers' accomplishment positively affects normative commitment, H(III)-2c1: university teachers' depersonalization negatively affects affective commitment, and H(III)-2c2: university teachers' depersonalization positively affects continuance

commitment, were not supported in the current study because of no significant path coefficients.

4.5.6 The Influence of Organizational Justice on Organizational Commitment

4.5.6.1 *Hypotheses on the Relationship between Organizational Justice and Organizational Commitment*

Organizational justice perception has long been considered as explanatory variable in organizational research (Adams, 1965; Deutsch, 1975; Leventhal, 1976). Many studies found that organizational justice might influence organizational commitment. Based on brief review of literature, Colquitt (2001) found that the justice perceived by employees can increase their positive perceptions and behaviors toward the organization, such as job satisfaction, organizational commitment, and organizational identification. Similarly, Fulford (2005) showed that organizational justice perception of hotel employees had an impact on their commitment. In line with these results, Tallman et al. (2009) also found that employees who believed that they were treated fairly would be more likely to hold positive attitudes toward the organization, outcomes, and supervisors, and be more committed to the organization. Ramamoorthy and Flood (2004) found that the higher the perceived distributive justice and procedural justice of employees, the higher their commitment to the organization; both the procedural and distributive justice perceptions were related with affective commitment. Konovsky and Cropanzano (1991) suggested that organizational justice has no effect on continuance commitment because continuance commitment emerges when individual feels powerlessness to resign, other than feels identification with the

organization. Other results support the agent-system model, in which procedural justice is a stronger predictor of organizational commitment than interpersonal or informational justice (Masterson et al., 2000; Colquitt et al., 2001).

However, most of the research on organizational justice has been done by industrial-organizational and occupational psychologists (Mueller, Wallace & Price, 1992). Only a few of studies on organizational justice have been conducted within educational settings. For example, Yavuz (2010) examined the effects of teachers' perception of organizational justice and culture on organizational commitment. This research population comprises the teachers who work in Konya, Turkey. The sample consists of 445 teachers who were selected according to the random sampling method. According to the results of the study, significant correlations were found between two types of justice (i.e., distributive justice and procedural justice) and three components of commitment (i.e., affective, continuance and normative commitment). Moreover, it was observed that procedural justice was predictive of affective commitment.

Therefore, based on the previous literature, from an overall perspective, the current study proposed one hypothesis:

H(III)-3: University teachers' organizational justice positively affects organizational commitment.

In view of organizational justice and organizational commitment are all multi-dimensional, from a specific dimension perspective, the current study proposed several more hypotheses as follows:

H(III)-3a1: University teachers' distributive justice positively affects affective commitment.

H(III)-3a2: University teachers' distributive justice has no effect on affect

continuance commitment.

H(III)-3a3: University teachers' distributive justice positively affects normative commitment.

H(III)-3b1: University teachers' procedural justice positively affects affective commitment.

H(III)-3b2: University teachers' procedural justice has no effect on continuance commitment.

H(III)-3b3: University teachers' procedural justice positively affects normative commitment.

H(III)-3c1: University teachers' interactional justice positively affects affective commitment.

H(III)-3c2: University teachers' interactional justice has no effect on continuance commitment.

H(III)-3c3: University teachers' interactional justice positively affects normative commitment.

4.5.6.2 *CFA for the Influence of Overall Organizational Justice on Overall Organizational Commitment*

According to the above hypothesis H(III)-3, applying the data from the formal investigation, the current study structured a second-order structural model for the influence of organizational justice on organizational commitment. Figure 4.16 presents completely standardized path coefficients with their corresponding significance tests for this second-order structural model. The goodness of fit for this model is described in Table 4.36.

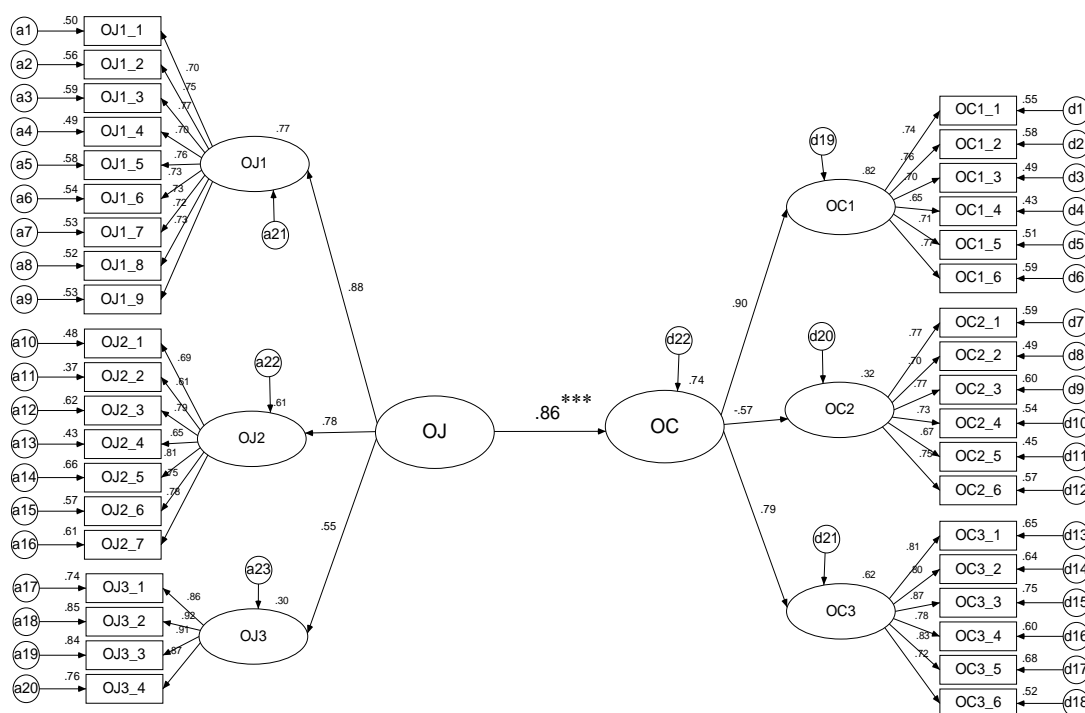


Figure 4.16. The second-order structure model of OJ's effect on OC.

According to results of CFA, the goodness-of-fit indexes supported the second-order structure model of OJ's effect on OC. All the indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.76; the RMSEA was 0.042; the RMR was .056; the GFI was .88; the AGFI was .86; the NFI was .89; the CFI was 0.95 (see Table 4.36).

Table 4.36.

Goodness-of-fit indexes for the second-order structure model of OJ's effect on OC

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of OJ on OC	1156.73	658	1.76	.042	.878	.056	.862	.893	.951

In view of the supposed structure model of OJ's effect on OC was fit well the data, therefore, H(III)-3: university teachers' organizational justice positively affects organizational commitment, was supported.

4.5.6.3 CFA for the Influence of Each Dimension of Organizational Justice on Each Dimension of Organizational Commitment

According to the above hypotheses H(III)-3a1, 3a2, 3a3, 3b1, 3b2, 3b3, 3c1, 3c2 and 3c3, applying the data from the formal investigation, the current study structured a structural model for the influence of each dimension of organizational justice on each dimension of organizational commitment. Figure 4.17 presents completely standardized path coefficients with their corresponding significance tests for this structural model. The goodness of fit for this model is described in Table 4.37.

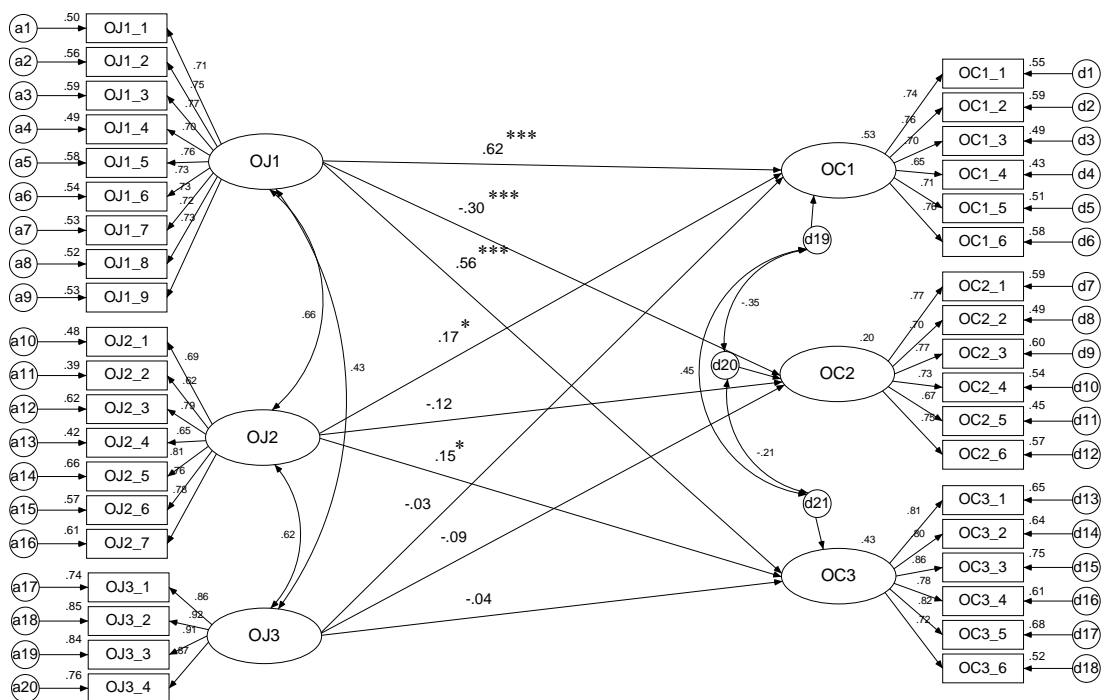


Figure 4.17. The structure model of OJ's dimensions' effect on OC's dimensions.

According to results of CFA, the goodness-of-fit indexes supported the structure model of the influence of OJ's dimensions' effect on OC's dimensions. All indexes were good: the relative chi-square statistic (χ^2/df) for the model was 1.67; the RMSEA was 0.039; the RMR was .038; the GFI was .89; the AGFI was .87; the NFI was .90; the CFI was 0.96 (see Table 4.37).

Table 4.37.

Goodness-of-fit indexes for the second-order structure model of OJ's dimensions' effect on OC's dimensions

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>GFI</i>	<i>RMR</i>	<i>AGFI</i>	<i>NFI</i>	<i>CFI</i>
Model of OJ's dimensions on OC's dimensions	1087.09	650	1.67	.039	.885	.038	.868	.900	.957

In view of the supposed structure model of OJ's dimensions' effect on OC's dimensions was fit well the data, therefore, seven hypotheses, i.e., H(III)-3a2: university teachers' distributive justice has no effect on continuance commitment, H(III)-3b1: university teachers' procedural justice positively affects affective commitment, H(III)-3b2: university teachers' procedural justice has no effect on continuance commitment, H(III)-3b3: university teachers' procedural justice positively affects normative commitment, H(III)-3c1: university teachers' interactional justice positively affects affective commitment, and H(III)-3c3: university teachers' interactional justice positively affects normative commitment, were supported in the current study. Whereas, two hypotheses, i.e., H(III)-3a1: university teachers' distributive justice positively affects affective commitment, and H(III)-3a3: university teachers' distributive justice positively affects normative

commitment, were not supported because of no significant path coefficients. While, H(III)-3c2: university teachers' interactional justice has no effect on continuance commitment, was not supported because of the negative path coefficient.

4.5.7 CFA for the Mediating Effect of Job Burnout between Organizational Justice and Organizational Commitment

4.5.7.1 *Hypotheses on the Mediating Effect of Job Burnout*

Based on the above results of the current research that university teachers' organizational justice positively affects organizational commitment, job burnout negatively affects organizational commitment, and organizational justice negatively affects job burnout, and also taking account of the relationships between the factors of the three measures (OJ, JB, and OC), the current research proposed several hypotheses as follows:

H(III)-4: Job burnout is a mediator between organizational justice and organizational commitment.

H(III)-4a1: Emotional exhaustion is a partial mediator between interactional justice and affective commitment.

H(III)-4a2: Emotional exhaustion is a partial mediator between interactional justice and continuance commitment.

H(III)-4a3: Emotional exhaustion is a partial mediator between interactional justice and normal commitment.

H(III)-4a4: Personal accomplishment is a partial mediator between interactional justice and affective commitment.

H(III)-4a5: Depersonalization is a partial mediator between interactional justice and normative commitment.

H(III)-4a6: Depersonalization is a partial mediator between procedural justice and normative commitment.

4.5.7.2 The Mediating Effect of Job Burnout between Organizational Justice and Organizational Commitment

Based on H (III)-4, the current research constructed a job burnout's partial mediating effect structural model and a job burnout complete mediating effect structural model. Figure 4.18 presents the completely standardized path coefficients for the former Model, while for the latter Model, the completely standardized path coefficients are presented in Figure 4.19. The goodness of fit for these two models is described in Table 4.38.

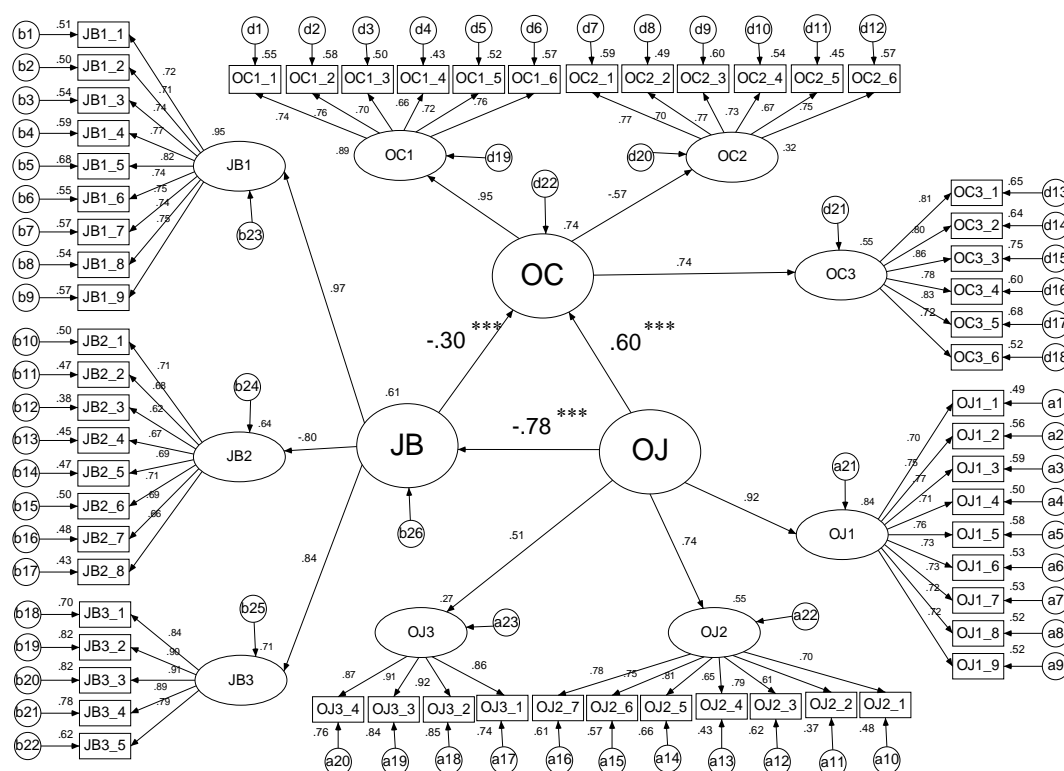


Figure 4.18. The structure model for partial mediating effect of JB.

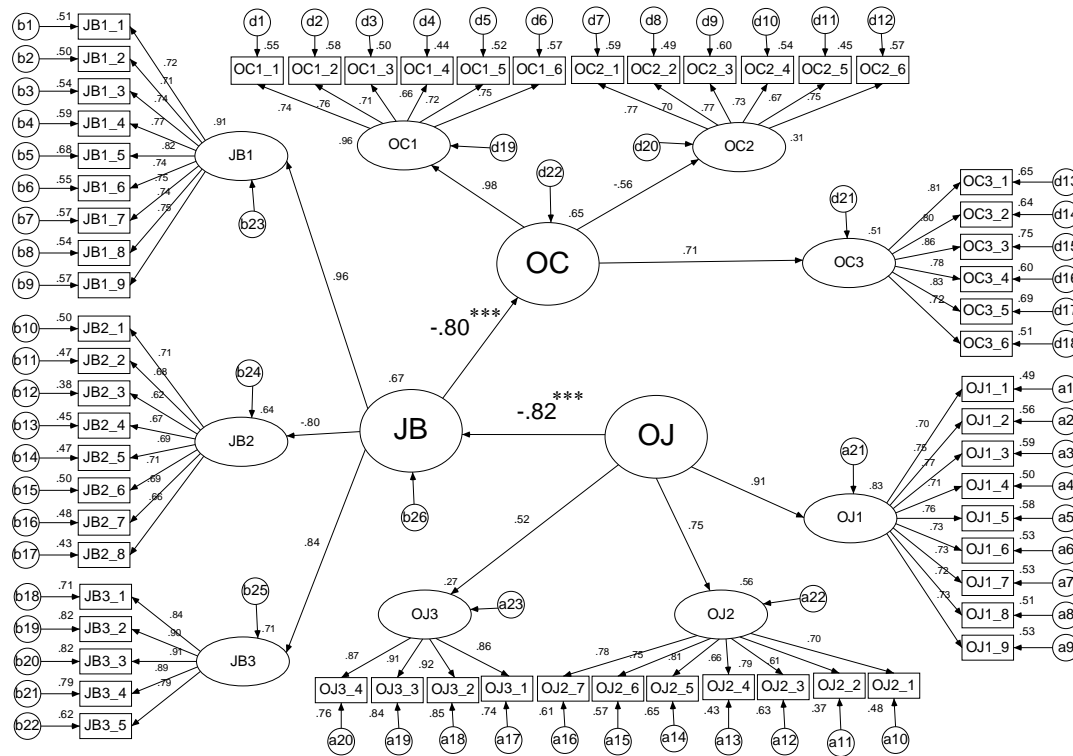


Figure 4.19. The structure model for full mediating effect of JB.

Table 4.38.

CFA of JB's partial and full mediating effects

Model	χ^2	df	χ^2/df	RMSEA	RMR	GFI	CFI	AGFI	NFI
Measurement Model	2640.86	1698	1.56	.036	.063	.836	.944	.823	.858
partial mediating effect model	2640.86	1698	1.56	.036	.063	.836	.944	.823	.858
Full mediating effect model	2696.92	1699	1.59	.037	.070	.832	.941	.819	.855

Table 4.39.

The $\Delta\chi^2$ for JB's partial and full mediating models

<i>Model Comparison</i>	<i>df Difference</i>	<i>χ^2 Difference</i>
partial mediating effect model vs. Measurement Model	0	0
full mediating effect model vs. Measurement Model	1	56.06**
partial mediating effect vs. full mediating effect model	1	56.06**

According to Anderson & Gerbing (1988), a nonsignificant difference between the measurement model and the theoretical model indicated that the theoretical model was successful in accounting for the observed relationships among the latent variables.

In the current research, the chi-square of the partial mediating effect model was 2640.863 with 1698 *df*, and the chi-square of the measurement model was also 2640.863 with 1698 *df* (see Table 4.38). No chi-square difference between these two models existed (see Table 4.39). Therefore, the results of the nonsignificant chi-square difference test indicated that the partial mediating effect model achieved an acceptable fit to the data.

For the full mediating effect model, the chi-square was 2696.924 with 1699 *df*. The chi-square difference tests comparing the partial mediating effect model and the full mediating effect model revealed a significant difference value of 56.061 with 1*df* at $p < .01$ (see Table 4.39).

A significant difference between the two models indicated that the additional one path from organizational justice to organizational commitment represented in the partial mediating effect model contributed to their explanatory power. In other words, given the significant change in chi-square, the results revealed that partial mediating effect model was better than the full

mediating effect model. A third chi-square difference test between the measurement model and the full mediating effect model was also conducted. The results revealed a significant difference value of 56.061 with 1 *df* at $p < .01$ (see Table 4.39). The difference between the chi-square statistics was significant, therefore the partial mediating effect model was accepted as the final model, meanwhile, H(III)-4: job burnout is a mediator between organizational justice and organizational commitment, was supported in the current study.

4.5.7.3 *The Mediating Effect of JB's Dimensions between OJ's Dimensions and OC's Dimensions*

Based on H (III)-4a1 – 4a6, the current research constructed a structural model describing the three factors of job burnout's partial mediating effect between two dimensions of justice (interactional and procedural justice) and the three factors of organizational commitment, with a corresponding full mediating structural model. Figure 4.20 presents the completely standardized path coefficients for the former Model, while for the latter Model, the completely standardized path coefficients are presented in Figure 4.21. The goodness of fit for these two models is described in Table 4.40.

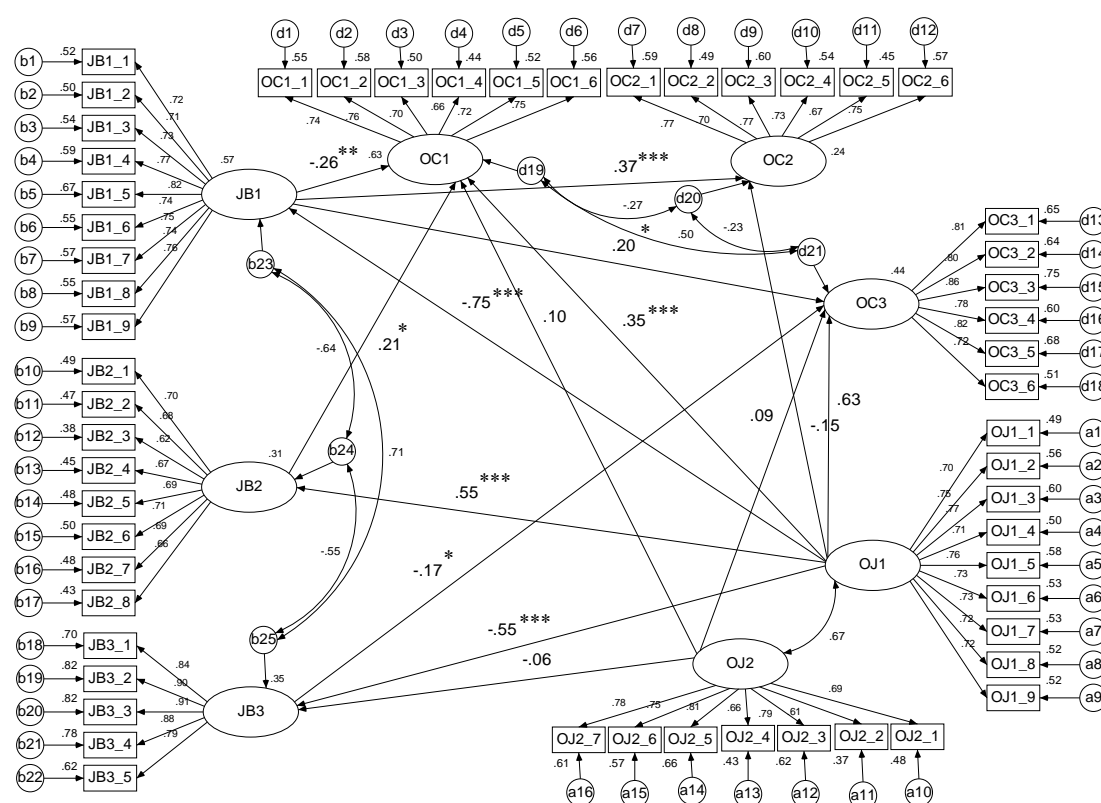


Figure 4.20. The structure model for partial mediating effect of JB's dimensions between OJ's dimensions and OC's dimensions.

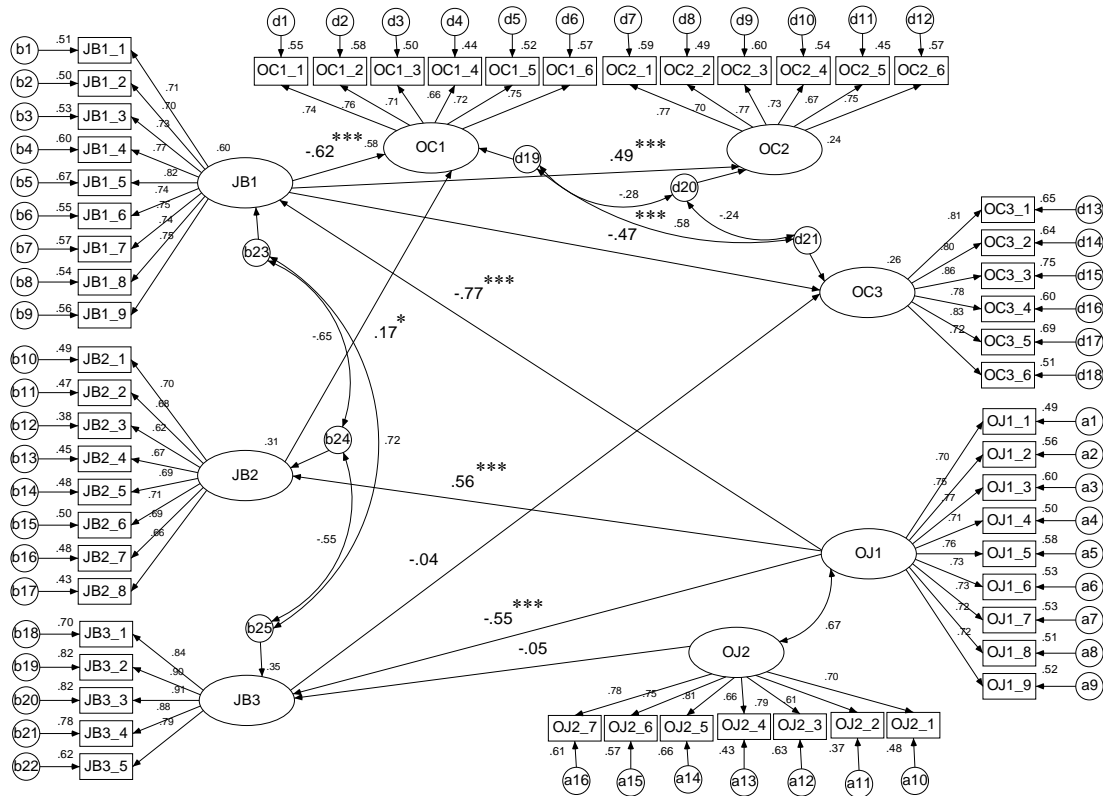


Figure 4.21. The structure model for full mediating effect of JB's dimensions between OJ's dimensions and OC's dimensions.

In the current research, the chi-square of the partial mediating effect model in Figure 4.26 was 2166.036 with 1463 *df*, and the chi-square of the measurement model was 2153.589 with 1456 *df* (see Table 4.40). A chi-square difference value of 12.447 with 7 *df* between the two models was not statistically significant (see Table 4.41). Therefore, the results of the insignificant chi-square difference test indicated that the partial mediating effect model achieved an acceptable fit to the data.

For the full mediating effect model in Figure 4.21, the chi-square was 2267.053 with 1468 *df*. The chi-square difference tests comparing the partial mediating effect model and the full mediating effect model revealed a

significant difference value of 101.017 with 3 *df* at $p < .01$ (see Table 4.41).

Given the significant change in chi-square, the results revealed that partial mediating effect model is better than full mediating effect model. A third chi-square difference test between the measurement model and the full mediating effect model was also conducted. The results revealed a significant difference value of 113.464 with 12 *df* at $p < .01$ (see Table 4.41). The difference between the chi-square statistics was significant, therefore the partial mediating effect model was accepted as the final model, meanwhile, four hypotheses, i.e., H(III)-4a1: emotional exhaustion is a partial mediator between interactional justice and affective commitment, H(III)-4a3: emotional exhaustion is a partial mediator between interactional justice and normative commitment, H(III)-4a4: accomplishment is a partial mediator between interactional justice and affective commitment, and H(III)-4a5: depersonalization is a partial mediator between interactional justice and normative commitment, were supported in the current study. However, two hypotheses, i.e., H(III)-4a2: emotional exhaustion is a partial mediator between interactional justice and continuance commitment, and H(III)-4a6: depersonalization is a partial mediator between procedural justice and normative commitment, were not supported because of the no statistically significant path coefficients from depersonalization to normative commitment, from procedural justice to normative commitment, and from interactional justice to continuance commitment.

Table 4.40.

CFA for partial and full mediating effects of JB's dimensions between OJ's dimensions and OC's dimensions

<i>Model</i>	χ^2	<i>df</i>	χ^2/df	<i>RMSEA</i>	<i>RMR</i>	<i>GFI</i>	<i>CFI</i>	<i>AGFI</i>	<i>NFI</i>
Measurement Model	2153.59	1456	1.48	.033	.046	.854	.953	.840	.869
partial mediating effect model	2166.04	1463	1.48	.033	.048	.853	.953	.840	.869
Full mediating effect model	2267.05	1468	1.54	.035	.060	.847	.947	.833	.862

Table 4.41. The $\Delta\chi^2$ for partial and full mediating effects of JB's dimensions between OJ's dimensions and OC's dimensions

<i>Model Comparison</i>	<i>df Difference</i>	χ^2 <i>Difference</i>
partial mediating effect model vs. Measurement Model	7	12.45
full mediating effect model vs. Measurement Model	12	113.46**
partial mediating effect vs. full mediating effect model	3	101.02**

4.6 SUMMARY OF HYPOTHESE TESTING

In addition to illustrate generally the sample characteristics and necessary descriptive statistics, this study applied the method of ANOVA and *t* test to compare the difference in the scores of the three core variables (organizational justice, job burnout and organizational commitment) in terms of the selected demographic variables, then applied CFA to test the adequacy of the measurement models and the structural models, and to examine the relationships among the variables. Table 4.42 summarizes the all hypotheses testing results.

Table 4.42.

Summary of hypotheses testing

	Hypotheses	Results
H(I)-1	The four-dimensional structure of organizational justice is appropriate for university teachers.	Not supported
H(I)-2	The three-dimensional structure of job burnout is appropriate for university teachers.	Supported
H(I)-3	The three-dimensional structure of organizational commitment is appropriate for university teachers.	Supported
H(II)-1	There are different levels of organizational justice in terms of demographic characteristics (i.e., gender, age, length of teaching service, marital status, education level, academic rank, income, promotion situation, similarly hereinafter) among the participants.	Partly supported
H(II)-2	There are different levels of job burnout in terms of demographic characteristics among the participants.	Partly supported

Table 4.42. (continued)

	Hypotheses	Results
H(II)-3	There are different levels of organizational commitment in terms of demographic characteristics among the participants.	Partly Supported
H(III)-1	University teachers' organizational justice negatively affects job burnout.	Supported
H(III)-1a1	University teachers' distributive justice negatively affects emotion exhaustion.	Not supported
H(III)-1a2	University teachers' distributive justice positively affects accomplishment.	Not supported
H(III)-1a3	University teachers' distributive justice negatively affects depersonalization.	Not supported
H(III)-1b1	University teachers' procedural justice negatively affects emotion exhaustion.	Not supported
H(III)-1b2	University teachers' procedural justice positively affects accomplishment.	Not supported
H(III)-1b3	University teachers' procedural justice negatively affects depersonalization.	Supported
H(III)-1c1	University teachers' interactional justice negatively affects emotion exhaustion.	Supported
H(III)-1c2	University teachers' interactional justice positively affects accomplishment.	Supported
H(III)-1c3	University teachers' interactional justice negatively affects depersonalization	Supported
H(III)-2	University teachers' job burnout negatively affects organizational commitment.	Supported
H(III)-2a1	University teachers' emotion exhaustion negatively affects affective commitment.	Supported

Table 4.42. (continued)

	Hypotheses	Results
H(III)-2a2	University teachers' emotion exhaustion positively affects continuance commitment.	Supported
H(III)-2a3	University teachers' emotion exhaustion negatively affects normative commitment.	Supported
H(III)-2b1	University teachers' personal accomplishment positively affects affective commitment.	Supported
H(III)-2b2	University teachers' personal accomplishment negatively affects continuance commitment.	Not supported
H(III)-2b3	University teachers' personal accomplishment positively affects normative commitment.	Not supported
H(III)-2c1	University teachers' depersonalization negatively affects affective commitment.	Not supported
H(III)-2c2	University teachers' depersonalization positively affects continuance commitment	Not supported
H(III)-2c3	University teachers' depersonalization negatively affects normative commitment.	Supported
H(III)-3	Organizational justice positively affects organizational commitment.	Supported
H(III)-3a1	University teachers' distributive justice positively affects affective commitment.	Not supported
H(III)-3a2	University teachers' distributive justice has no effect on continuance commitment.	Supported
H(III)-3a3	University teachers' distributive justice positively affects normative commitment.	Not supported
H(III)-3b1	University teachers' procedural justice positively affects affective commitment.	Supported

Table 4.42. (continued)

	Hypotheses	Results
H(III)-3b2	University teachers' procedural justice has no effect on continuance commitment.	Supported
H(III)-3b3	University teachers' procedural justice positively affects normative commitment.	Supported
H(III)-3c1	University teachers' interactional justice positively affects affective commitment.	Supported
H(III)-3c2	University teachers' interactional justice has no effect on continuance commitment.	Not Supported
H(III)-3c3	University teachers' interactional justice positively affects normative commitment.	Supported
H(III)-4	Job burnout is a mediator between organizational justice and organizational commitment.	Supported
H(III)-4a1	Emotional exhaustion is a partial mediator between interactional justice and affective commitment.	Supported
H(III)-4a2	Emotional exhaustion is a partial mediator between interactional justice and continuance commitment.	Not Supported
H(III)-4a3	Emotional exhaustion is a partial mediator between interactional justice and normative commitment.	Supported
H(III)-4a4	Personal accomplishment is a partial mediator between interactional justice and affective commitment.	Supported
H(III)-4a5	Depersonalization is a partial mediator between interactional justice and normative commitment.	Supported
H(III)-4a6	Depersonalization is a partial mediator between procedural justice and normative commitment.	Not Supported

Table 4.42. (continued)

	Hypotheses	Results
H(III)-5	University teachers' organizational justice positively affects academic performance.	Partly Supported
H(III)-5a	University teachers' interactional justice positively affects academic performance.	Partly Supported
H(III)-5b	University teachers' procedural justice positively affects academic performance.	Partly Supported
H(III)-5c	University teachers' distributive justice positively affects academic performance.	Partly Supported
H(III)-6	University teachers' job burnout negatively affects academic performance.	Partly Supported
H(III)-6a	University teachers' emotional exhaustion negatively affects academic performance.	Partly Supported
H(III)-6b	University teachers' personal accomplishment positively affects academic performance.	Not Supported
H(III)-6c	University teachers' depersonalization negatively affects academic performance.	Partly Supported
H(III)-7	University teachers' organizational commitment positively affects academic performance.	Not supported
H(III)-7a	University teachers' affective commitment positively affects academic performance.	Not supported
H(III)-7b	University teachers' continuance commitment does not affect academic performance.	Not supported
H(III)-7c	University teachers' normative commitment positively affects academic performance.	Not supported

4.7 TOTAL, DIRECT, AND INDIRECT EFFECTS OF THE EXOGENOUS VARIABLES ON THE ENDOGENOUS VARIABLES

The direct effects are the influences of one variable on another that are not mediated by any other variable, while indirect effects are those that are mediated by at least one other variable. The total effects are the sum of the direct and indirect effects. The indirect and total effects can help to answer important questions that are not addressed by examining the direct effects (Bollen, 1989, p.376). Table 4.44 and 4.45 present the indirect, direct, and total effects of the constructs in two models, i.e., the total mediating Model of OJ on JB and OC, the mediating Model of JB's sub-dimensions on OJ's and OC's sub-dimensions.

First, Table 4.43 revealed that OC received a .23 significant positive indirect effect from OJ through JB, and a .60 significant positive direct effect from OJ. The total effect of organizational justice on organizational commitment was .55. OC also reflected a .30 significant negative direct effect from JB. Thus, JB strongly partially mediated the relationship between OJ and OC.

Second, Table 4.44 showed that affective commitment received not only a .35 positive direct effect from interactional justice, but also a .20 positive indirect effect from interactional justice via emotional exhaustion. The total effect of interactional justice on affective commitment was .55. That is to say, emotional exhaustion is an important partial mediator between interactional justice and affective commitment. Meanwhile, emotional exhaustion also affected the relationship between interactional justice and normative commitment. The path analysis showed that normative commitment received a .63 positive direct effect from interactional justice, and a .15 negative indirect effect from interactional justice via emotional exhaustion. The total effect of

interactional justice on normative commitment was .48. This result manifested that emotional exhaustion is also an important partial mediator between interactional justice and normative commitment. In terms of the relationship between interactional justice and continuance commitment, however, not as expected, the results indicted that the effect of emotional exhaustion was full mediating, rather than partial mediating, because of the no significant path coefficients from interactional justice and continuance commitment. Specifically, continuance commitment only received a .27 significantly negative indirect effect from interactional justice via emotional exhaustion, while the direct effect from interactional justice is -.15, which was not statistically significant. Hence, emotional exhaustion was a full mediator between interactional justice and continuance commitment. As far as accomplishment was concerned, its partial mediating effect between interactional justice and affective commitment existed. Specifically, affective commitment received a .35 positive direct effect from interactional justice, meanwhile, also received a .12 positive indirect effect from interactional justice via accomplishment. The total effect of interactional justice on affective commitment was .47. For depersonalization, the current study found that it was a partial mediator between interactional justice and normative commitment. Specifically, normative commitment received a .63 positive direct effect from interactional justice, as well as a .09 positive indirect effect from interactional justice via depersonalization. The total effect of interactional justice on normative commitment was .72. Whereas, not as expected, the current study found that depersonalization was not a mediator between procedural justice and normative commitment because of two insignificant path coefficients (.09, -.06, respectively) from procedural justice to normative commitment and from procedural justice to depersonalization.

Table 4.43.

Total, indirect, and direct effects in the total model of OJ, JB, and OC

	JB			OC		
	DE	IE	TE	DE	IE	TE
OJ	-.78		-.78	.60	.23	.83
JB				-.30		-.30

Note. OJ = Organizational Justice; JB = Job Burnout; OC = Organizational Commitment; DE = Direct Effect; IE = Indirect Effect; TE = Total Effect.

Table 4.44.

Total, indirect, and direct effects in mediating model of JB's dimensions on OJ's dimensions and OC's dimensions

	JB1			J			B2			JB3			OC1			OC2			OC3		
	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE
OJ3	-.75		-.75	.55		.55				-.59		-.59	.35	.32	.67	-.15	-.28	-.43	.63	-.15	.48
JB1													-.26		-.26	.37		.37	.20		.20
JB2																.21		.21			
JB3																			-.17		-.17

Note. JB1 = Emotional Exhaustion; JB2 = Accomplishment; JB3 = Depersonalization; OJ3 = Interactional Justice; OC1 = Affective Commitment; OC2 = Continuance Commitment; OC3 = Normative Commitment; DE = Direct Effect; IE = Indirect Effect; TE = Total Effect.

4.8 SUMMARY

This chapter firstly presented the sample characteristics and necessary descriptive statistics. Then, the method of analysis of variance (ANOVA) was applied to compare the difference in the scores of the three key variables (organizational justice, job burnout and organizational commitment) in terms of the selected demographic variables. Confirmatory factor analysis was conducted to test the fit of the measurement models. Reliability and validity of each construct were examined. The procedures conducted in developing the structural models were explained. In each structural equation model the relationships among the variables were tested. Finally, all hypotheses testing results were summarized.



CHAPTER *V*

DISCUSSION

5.1 INTRODUCTION

The main purpose of the current study was to investigate the relationship between organizational justice, job burnout and organizational commitment among Chinese university teachers. In addition, just as aforementioned, the current study also investigated the following questions: (1) Are the levels of organizational justice, job burnout and organizational commitment different in terms of demographic characteristics among the participants? (2) Do organizational justice, job burnout and organizational commitment affect academic performance among the participants?

This chapter not only conducts a relatively elaborate discussion of the findings, but also presents the implications derived from the findings, and the limitations of the study. Suggestions for future research are also offered.

5.2 DISCUSSION OF THE RESEARCH FINDINGS

5.2.1 The Reliability and Validity of Measuring Instruments

In terms of the applicability of measuring instruments adopted in the current study, the results showed that both MBI-ES and OCQ had acceptable reliability and validity. All the indicators had significant loadings on their hypothesized latent variables and no significant cross loadings existed, suggesting acceptable construct validity. These results were in line with some previous relevant studies. For example, As far as MBI-ES was concerned, the current results were consistent with Li (2005) who applied a Chinese version of MBI-ES to politics teachers of high school. The results supported the three-factor structure of the MBI-ES, and reliability coefficients (α values were from .87 to .94) for the overall scale and the sub-scales were all high enough statistically, indicating that the instrument had good applicability cross-culturally.

In terms of OCQ, the results of EFA in the current study supported the three-factor organizational commitment model developed by Meyer and Allen (1997). In addition, the reliability coefficients (from .87 to .92) were all statistically high enough for the overall scale and sub-scales, indicating the scale was applicable cross-culturally. The current results were consistent with Chen and Francesco (2003), and Wang (2008). Of note is that, in order to examine the mediation of organizational commitment between organizational justice and job performance, Wang (2008) also adopted Meyer and Allen's (1997) OCQ based on Chinese reality.

Just as aforementioned, there has been evidence suggesting that the four-factor organizational justice model is generally valid (Colquitt, 2001; Colquitt et al., 2001; Judge & Colquitt, 2004; Thurston, 2000). Judge and

Colquitt (2004), for example, conducted a confirmatory factor analysis of the measure to verify the fit of a four-dimensional conceptualization with a sample of faculty employed at 23 universities in the United States. The analysis showed an acceptable fit for a four-factor solution. Of importance, according to Judge and Colquitt (2004), the four-dimensional structure provided a better fit to the data than the three-factor model collapsing interpersonal and informational justice. The work is highly revelatory, but tentative. Thus, up to now, although some progress is being made, the literature on organizational justice is still marked by a debate over whether the domain includes one, two, three, or four, or more dimensions of justice.

In the current study, as described above, organizational justice was measured using Colquitt's (2001) *Organizational Justice Questionnaire* (OJQ). According to Colquitt (2001), OJQ consists of four subscales corresponding to procedural, distributive, informational, and interpersonal justice. However, the results of the current study showed that the items of the two subscales, i.e., informational and interpersonal justice loaded together onto a single factor, rather than two independent factors. Given the introduction of informational and interpersonal justice was originally by means of further subdividing interactional justice, the current study termed this very factor as *interactional justice*. This result implied that Chinese university teachers viewed informational and interpersonal justice just as similar things, or as the same process which could not be intersected simultaneously. Thus, for Chinese university teachers, the three-factor justice is more suitable than the four-factor one. Furthermore, this result also indicated that, as one of the most commonly used measures of organizational justice, Colquitt's (2001) *Organizational Justice Questionnaire* (OJQ) is applicable in Chinese university context.

5.2.2 The Difference comparison in Terms of Demographic Variables

One of the research questions is concerned with the relationships between demographic variables and the three constructs of interest. The results showed that several studied demographic variables had significant relationships with organizational justice, job burnout, or organizational commitment. Here this study presents the discussion about these demographic variables:

Gender

The results of the current study showed that in terms of organizational justice (including its dimensions), gender only influenced distributive justice; specifically, the male teachers' perception of distributive justice was significantly higher than that of the female ones. One explanation may be that, with the society developing, despite the idea of gender equality has been accepted by more and more Chinese people, in reality, sexual discrimination still exists, even at Chinese university. Moreover, the females may be more sensitive to fairness in allocation than the males. The results of the current study were not well in line with Xiao (2007) who found that the scores from the males were significantly higher than those from the females in overall organizational justice and its dimensions. However, it is of note that the sample of Xiao (2007) was only P.E. teacher in universities; in addition, the instrument for measuring justice of Xiao (2007) was developed by Niehoff and Moorman (1993), rather than by Colquitt (2001). The differences in sample and instrument should be partly blamed for the above discrepancy.

In terms of organizational commitment, based on investigating some teachers from two universities in America and Canada, Dennis and Allan (2004) found that female teachers were significantly higher than male teachers

in perception of normative commitment. In China, Li (2005) also found that the females were significantly higher than the males in organizational commitment. However, the current study did not find significant difference in organizational commitment (including its three dimensions) between the males and the females. Nevertheless, the current results were in line with She (2007) and Ma (2009) who both found that gender did not significantly influence teachers' organizational commitment. The above discrepancy should be partly from the different participants and research methods.

According to relevant literatures, there were always divergences on the effects of demographic factors on job burnout. For teachers, some studies found significant differences in levels of burnout among teachers relative to demographic factors such as gender, age, marital status, tenure status, academic rank (Jackson, 1993; Kim-wan, 1991); whereas a few of studies did not find (Chenevey, Ewing & Whittington, 2008; Dillon & Tanner, 1995). Lackritz (2004) and Xiao (2007), for example, reported that male teachers had higher scores of depersonalization than female teachers. However, in a study on burnout among Italian and French teachers, Pedrabissi et al. (1993) found that female teachers had higher scores of depersonalization than male teachers. With Chinese sample, Li (2008) found evidence for Pedrabissi et al. (1993). According to Hogan and McKnight (2007), female higher education instructors were found to have scored higher on accomplishment than their male counterparts. As far as job burnout was concerned, the current study showed that no significant difference existed in emotional exhaustion, depersonalization and personal accomplishment between males and females, implying that gender was not a predictor to job burnout among Chinese university teachers. For getting reasonable explanation, further relevant research needs to be done.

Age

As for age, Wang (2008) indicated that since 30 years old, Knowledge Workers' perceived procedural justice began to weaken. Wang further explained that in modern times, given dominating more over advanced science and technology, the younger employees were valued more and more. However, the results of the current study did not offer support for Wang (2008). In the current study, there was not significant difference in organizational justice and procedural justice between different *age* groups of participants, while as far as distributive justice and interactional justice were concerned, significant difference appeared. Specifically, in terms of distributive justice and interactional justice, the group *more than 40 years old* was significantly higher than the other groups. The reason may be that, although the youngsters were likely valued more because of their domination over advanced science and technology, the Chinese current institutions of distribution and promotion at university were not more inclined towards them. Seniority or qualification still was one of the critical standards. While for the elders, particularly for the group *more than 40 years old*, because most of them had higher rank, higher welfare treatment, particularly, seniority, and abundant practical experiences, they more likely perceived their importance in the organization. Therefore, compared with the younger participants, the group *more than 40 years old* perceived higher distributive justice and interactional justice. Given this result, university managers should pay more attention to improve younger teachers' perception of justice, particularly of distributive justice and interactional justice.

In regard to organizational commitment, virtually, as for age, research divergency always exists. A number of studies indicated that *age* was one antecedent of organizational commitment (Abdullah & Ramay, 2012; Mathieu

& Zajac, 1990; Meyer & Allen, 1991; Smeenk, Eisinga, Teelken, & Doorewaard, 2006). However, certain research did not support this viewpoint. Chughtai and Zafar (2006), for example, did not find significant difference in organizational commitment among different *age* groups of university teachers.

Meyer and Allen (1993) suggested that aged employees more likely generated affective commitment to organization. In line with Meyer and Allen (1993), She (2007) found that in affective commitment, the group *more than 36 years old* was significantly higher than the group *no more than 30 years old*. However, She (2007) did not find significant difference in organizational commitment and continuance commitment between different *gender* groups of participants; while in normative commitment, they found that the group *more than 36 years old* was significantly higher than the group *26-30 years old*.

The current study manifested that *age* significantly influenced organizational commitment and affective commitment; specifically, the group *no more than 30 years old* was significantly higher than the group *more than 40 years old* in organizational commitment and affective commitment. May be because the *no more than 30 years old* university teachers mostly entered into their posts recently, always with higher work enthusiasm and positivity, thus they were always vigorous. In this society full of competition, they more experienced that their jobs were hard-won, so they more likely appreciated their full-time jobs as university teachers, and more likely generated commitment to organization. While for the *more than 40 years old* teachers, despite higher rank and higher welfare treatment, they always had heavier life pressure such as children's education and supporting the old parents. With time went by, their most indexes, both mentally and physically, began to drop with age. In addition, working in a same organization for 10 years or more, they more likely recognized the weakness of the organization, therefore, lower levels of organizational commitment more easily turned up among them.

In terms of job burnout, according to Maslach et al. (2001), of all the demographic variables, age was one of the variables that had been most consistently related to burnout. A number of studies had indicated that *age* influenced job burnout; nevertheless, the specific results were not consistent. For example, Xiao (2007) found that the *more than 45 years old* teachers were significantly higher than those *no more than 30 years old* in person accomplishment. However, Chenevey et al. (2008) manifested a negative correlation between all dimensions of burnout and age, indicating that the older the teachers were, the less likely they had tendencies toward burnout. The current study showed that the group *more than 40 years old* was significantly higher than the group *no more than 30 years old* in emotional exhaustion. One possible explanation for this finding is like the explanation mentioned above for the result regarding to affective commitment. Despite the divergency, there was still something in common: *age* was one variable related to burnout.

Educational Level

The current study showed no significant difference in organizational justice (including distributive justice, procedural justice, and interactional justice) between different *educational level* groups of participants. The results of the current study indicated that educational level did not significantly influence perception of justice among university teachers. May be within the circumstance of university, benefit distribution and leader-member relation are significantly influenced perhaps by other factors, such as capacity and academic rank, rather than educational level of teachers.

However, Li (2008) reported that according to educational level, employees significantly differed in perception of interactional justice. Li (2008) suggested that interactional justice, including leader-member relation and

information acquisition, reflected the fairness in course of interpersonal communication within the organization. Generally, the higher the level of education, the easier being thought highly of, the earlier getting relevant information related to job during communicating with the superiors. Nevertheless, to be noted that the participants of Li (2008) were employees from enterprise, not teachers; in addition, the instrument of justice measuring was adapted from Niehoff and Moorman (1993), not from Colquitt (2001).

In terms of organizational commitment (including affective commitment, continuance commitment, and normative commitment), the results of the current study also showed no significant difference between different *educational level* groups of teachers. These results may be because the following reasons: organizational commitment is essentially a kind of psychology contract to the organization, since all of the participants were high-level intellectuals, the specific educational level differences might only mean differences academically, and did not necessarily cause significantly different cognition and emotion to the same organization they belonging to. These current results were in line with Zhang (2006) and She (2007).

In terms of job burnout, some previous studies showed that employees with a higher level of education reported higher levels of burnout than less educated ones (Bakker et al., 2002; Maslach et al., 2001). However, others studies indicated different findings. For example, Li (2008) reported that in terms of *educational level*, there was no significant difference in emotional exhaustion, depersonalization and personal accomplishment. Based on investigating 275 university teachers in USA, Rush (2003) also found no significant association between educational level and any dimension of burnout.

In line with Li (2008) and Rush (2003), the current study also found no significant difference in emotional exhaustion, depersonalization and personal

accomplishment between different *educational level* groups of participants. The reason may be like the explanation aforementioned for organizational commitment.

Length of Teaching Service

In terms of perception of organizational justice, She (2007) found that the group with *no more than 2 years* teaching service was significantly higher than the group *6 or more years* only in perception of procedural justice, while in perception of organizational justice and its other dimensions, no significant difference existed. Not well in line with She (2007), the current study showed, the group with *no more than 2 years* teaching service was significantly higher than the other groups in both perceptions of organizational justice and its sub-dimensions. The reasons for this probably are as follows: in modern China, with the expansion of university enrollment, more and more university graduates swarm into market for job. With the market competition becomes more and more drastic, the employment situation is getting severer and severer, and thus the difficult employment of university students has become a hot social topic. Given this reality, the teachers just entering into university should feel very fortunate for their relative good positions. They more likely felt satisfactory with their organization, less likely noted the defect of their organization, and thus communicated more likely actively with their superiors. Therefore, it is reasonable that their perceptions of justice were significantly higher than other groups of university teachers. Nevertheless, with the growing length of teaching service and the growing knowledge about their organization especially the defect of their organization system, university teachers' perceptions of justice lowered significantly.

In terms of organizational commitment, the current study indicated that

for *length of teaching service*, the group *11 years or more* was significantly lower than the group *no more than 10 years*. The above result supported the finding of Mathieu and Zajac (1990) that organizational tenure was one antecedent of organizational commitment. In terms of affective commitment, the results of the current study showed that the group *no more than 2 years* was significantly higher than the other groups; while Ma (2009) found that the group *no less than 16 years* was significantly higher than the group *3-10 years*. In terms of normative commitment, the current study showed that the group *no more than 2 years* was significantly higher than the other groups; while Ma (2009) found no significant difference between different *teaching age* groups of teachers. While for continuance commitment, both the current study and Ma (2009) found no significant difference.

According to the current study, the group *no more than 2 years* was significantly higher than other groups in affective commitment and normative commitment. Just as aforementioned, given teachers with *no more than 2 years* teaching age were mostly young and new teachers, entering into their posts recently, facing with the new working circumstance, and always had higher working enthusiasm and positivity. In this society full of competition, they more realized that their jobs were hard-won, so they more likely appreciated their full-time jobs as university teachers, and more likely generated affective commitment to organization. In addition, as new teachers, they generally accepted training in professional ethics, thus it is reasonable that they had significantly higher normative commitment to organization.

In terms of job burnout, the group with *no more than 2 years* teaching service was significantly lower than the other groups in emotional exhaustion and depersonalization, and was significantly higher than the other groups in personal accomplishment. Just as discussed above, the teachers just recently entering into university more likely had higher work enthusiasm, higher

affective commitment to the organization; and thus, compared with those with longer teaching ages, the teachers with *no more than 2 years* teaching age more unlikely burned out.

Marital Status

In terms of marital status, the current study showed that the unmarried teachers were significantly higher than the married ones in perception of organizational justice (including its dimensions). Generally speaking, the unmarried teachers mainly were teachers with shorter length of teaching service, given the reasons aforementioned, they were more likely satisfied with the organization, and more likely communicated actively with their superiors, and thus their perception of organizational justice was significantly higher than the married teachers. However, She (2007) and Li (2008) found that there was not significant difference in perception of organizational justice and the three sub-dimensions between the married and the unmarried participants. Of course, the divergency should partly result from the different samples and methods. For example, the participants of Li (2008) were all employees in enterprises other than university teachers, and the instrument was adapted from the justice scale of Niehoff and Moorman (1993).

In terms of organizational commitment, the results of the current study indicated that marital status did not significantly influence organizational commitment (including its dimensions) among university teachers. These results were consistent with a number of prior studies (Li, 2005; Ma, 2009; Zhang, 2006). However, based on meta-analyses to 48 empirical studies on organizational commitment, Mathieu and Zajac (1990) found that marital status was one antecedent of organizational commitment. Given the divergency aforementioned, it is necessary to do more research to make clear the

corresponding relationships.

In terms of job burnout, in line with Rush (2003) and Chenevey et al. (2008), the current study also found that there was not significant difference in emotional exhaustion, accomplishment and depersonalization between the married and the unmarried teachers. However, a number of studies indicated that marital status influenced teachers' burnout (Maslach et al., 2001; Tian & Li, 2006). For example, Maslach et al. (2001) suggested that those who were unmarried were more prone to burnout compared with those who were married. In China, Tian and Li (2006) manifested that the unmarried middle school teachers were higher than the married ones in emotional exhaustion and personal accomplishment. The discrepancy about the effect of marital status on teachers' burnout may be related to cultural differences, as well as sampling and instrumental differences.

Academic Rank

The present study showed that the teachers with *assistant* rank were significantly higher than those with *instructor* rank in interactional justice, organizational commitment, and affective commitment; moreover, the assistants were also higher than those with *professor or associate professor* rank in organizational commitment and normative commitment. Note that in the current study, compared with the other rank groups, on the whole, assistants' organizational justice and organizational commitment were significantly higher. The reasonable explanation may be that, assistants mainly were young teachers just setting foot on job post. In order to resolve the problems confronted at their beginning of work, they likely communicated with superiors more boldly and frequently, and got more information related to their works. Therefore, their perception of interactional justice was relatively

higher. In addition, given entering into their posts recently, and always with higher work enthusiasm and ambition, assistants were always vigorous. Moreover, in this society full of competition, they more likely appreciated their job as university teacher. Hence, assistants more likely give rise to organizational commitment and affective commitment. In addition, because of just starting their vocation career, just strengthened profession ethic norms, assistants had relatively higher normative commitment.

In terms of job burnout, Jackson (1993) reported significant differences in levels of burnout between different *academic rank* groups of teachers. Lau et al. (2005) found that teacher's rank was the best predictor for personal accomplishment. For academic rank of teachers, the current study showed that significant differences existed in emotional exhaustion and depersonalization between the groups *assistant* and *instructor*, specifically, the latter was significantly higher than the former. The proper explanation may be that, as for instructors, because they had already worked several years at the university repeating the similar works year by year, the novelty to job gradually wore off, and thus they had not work enthusiasm and ambition as high as assistants. Meanwhile, as marriage and children came into their lives sequently, life pressures and loads became larger, thus instructors were not as vigorous as assistants. Naturally, compared to assistants, instructors were more prone to emotional exhaustion and depersonalization.

Monthly Income and Situation of Promotion

The current results showed that for *monthly income*, no significant difference existed in perception of organizational justice, procedural justice and interactional justice between different *monthly income* groups of the participants; while in distributive justice, significant difference only existed

between the groups *no more than 3000 CNY* and *3000-5000 CNY*, specifically, the latter was significantly higher than the former. Somewhat like the findings about monthly income, the current study indicated that, as for *situation of promotion*, no significant difference existed in perception of organizational justice, procedural justice and interactional justice between different *promotion* groups of participants; while in distributive justice, significant difference only existed between the groups *by a little margin* and *by a wide margin*, specifically, the latter was significantly higher than the former. Situation of promotion is relevant to the outcomes of employees; so to speak, it is a special kind of outcome. So the current study put *monthly income* and *situation of promotion* together to discuss. The above findings may be explained properly through justice theory. According to equity theory, employees often gauge whether the rewards they receive match their contributions to the organization or the rewards received by their colleagues (Adams, 1965; Leventhal, 1976). When one's outcomes relative to one's inputs are lower than those of reference objects, one feels *deprived*, thus unfairness emerges. In China, teachers' salaries increased together with the length of teaching service and academic rank, but usually not according to quantity of work. Thus, the group with lower incomes more likely felt unfair when they worked no less than the groups with higher incomes. Similarly, the group with a little margin of promotion more likely felt unfair when they worked no less than the group with a wide margin of promotion. According to these findings, in order to improve teachers' perception of distributive justice, university administrators should manage to reasonably reduce income gap and pay more attention to teachers' opportunities for promotion. Generally speaking, similar performance should correspond to similar opportunity for promotion.

Given that monthly income directly influences one's basic life, while promotion prospect might relate to one's social position and job satisfaction

(Lim, 2008), it is justifiable to predict that salary and promotion opportunity may have significant influence on organizational commitment and job burnout. However, in terms of organizational commitment and job burnout (including their respective dimensions), the current results showed that for monthly income and situation of promotion, no significant difference existed across different groups of participants. These findings implied that for university teachers, their promotion prospect had no significant influence on their working enthusiasm and their commitment to the university. May be for them, the direct concerns were how to improve their jobs, to increase levels of teaching and classroom management, and so on. After all, teaching is the principal duty for a teacher.

5.2.3 The Influences of OJ, JB and OC on Academic Performance

Teachers' performance is among the most important issues in education sector. Extending the understanding of employee behavior in other sectors into education fields, the current study examined the ways that three commonly recognized influencing factors, organizational justice, job burnout and organizational commitment affect teachers' performance. In order to investigate more objectively, the current study chose several commonly recognized academic performance variables, i.e., the participants' academic papers, books, and research projects during last 3 years, rather than adopted ready-made self-reported performance scale.

Just as aforementioned, organizational justice focuses on individuals' perception of fairness and is considered to be one of the core values that organizations covet (Reithel et al., 2007). It has been associated with job performance which is the degree to which employees are carrying out their jobs in a given work setting (Suliman, 2007).

According to the review of literature, the present study expected that the lower the levels of job burnout, the higher the levels of organizational justice and organizational commitment are, and the better the participants' academic performance is. Based on structural equation modeling, the present study found that almost as expected completely, overall OJ positively affected five out of the total six academic performance variables, i.e., *local projects*, *national projects*, *normal papers*, *core papers*, and *international papers*, with only one exception of *books*. Furthermore, in terms of the dimensions of OJ, interactional justice negatively affected *local projects* and *books*, while distributive justice positively affected *national projects* and *books*. These results were not in line with Cohen-Charash and Spector (2001) who asserted that "results from field studies show that job performance is strongly related to procedural justice, but hardly to distributive and interactional justice (p. 304)." In terms distributive justice, the current findings supported the views of equity theory. According to equity theory, perceptions of distributive fairness are based largely on comparison with others (Greenberg, 1987). The result of comparison (negative or positive) is strongly associated with the employee's perceived fairness. If the result is negative, they may wish to challenge the system that has given rise to this state of affairs (Suliman, 2007). Moreover, according to Folger and Cropanzano (1998), a number of potentially adverse behavioral reactions may follow this perception, such as reduced job performance, embarking on the use of withdrawal behavior such as absenteeism, turnover, and reduced cooperation. Thus, in order to improve teachers' academic performance, it is a feasible way for university administrators to enhance teachers' perception of distributive justice.

The current study also found that interactional justice negatively related to *local projects* and *books*. The reasonable explanation for this may be that while communicating with superiors frequently should be favorable to improve

common teachers' perception of fairness interpersonally and informationally, their energy and attention may not be well focused on academic research or teaching activities. However, this result was not in line with Devonish and Greenidg (2010) who found that interactional justice positively affected performance. For lack of robust theoretical reference presently, the specific reason remains need to be studied further.

For procedural justice, the current study found that it positively affected *local projects* and *core papers*. This result was in line with a deal of prior research (Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Devonish, & Greenidg, 2010; Masterson et al., 2000; Wang et al., 2010). For example, according to Masterson et al. (2000), procedural justice was positively related to job performance, and the more fairly employer treated employees, the higher performance employees created to pay back. Meta-analytic reviews have yielded a moderately strong positive relationship between procedural justice and task performance (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). These findings implied, since improving teachers' conceptions of procedural justice is favorable to enhance teachers' job performance, university administrators should pay more attention to teachers' perception of procedural justice. For example, university administrators should apply procedures consistently across people and across time (consistency), be free from bias (ensuring that a third party has no vested interest in a particular settlement) (bias suppression), ensure that accurate information is collected and used in making decisions (information truthful and correct), have some mechanism to correct flawed or inaccurate decisions (correctability), conform to personal or prevailing standards of ethics or morality (ethicality), and ensure that the opinions of various groups affected by the decision have been taken into account (representation). It will be helpful to form the procedural justice if decision makers can insist in these standards (Leventhal et al., 1980).

In terms of job burnout, the current study found that overall JB negatively affected *core papers*. This result supported Cordes and Dougherty (1993) who pointed out that burnout is related to low performance. When individuals lack motivation but have to do their jobs, they will be bored with it, perceiving exhaustion of body and mind, and thus have reduced performances. Shirom (2003) suggested that the negative correlation between job burnout and job performance is likely to be explained by burned-out individuals' impaired coping ability and their reduced level of motivation to perform. Therefore, in order to improve teachers' job performance, university administrators should manage to reduce the levels of teachers' job burnout. While for the three dimensions of JB, emotional exhaustion negatively affected *national projects*, *normal papers*, and *core papers*. This finding supported Janssen, Lam, and Huang (2010) who found a negative relationship between emotional exhaustion and job performance. According to this finding, university administrators should care about teachers' affective experiences, manage to reduce their work stress, enrich their spare time, and carry out healthy knowledge lectures, and so on.

For depersonalization, the current study found that it positively affected *national projects*, *international papers*, and *normal papers*. This finding was inconsistent with Gorji and Vaziri (2011) who argued that the performance of the employees decreased due to increasing emotional exhaustion, depersonalization and vice versa. To explain the current finding, some theories about depersonalization can be taken into account. Some researchers argue that depersonalization corresponds to the notion of coping; through depersonalization, the individual attempts to staunch the depletion of emotional energy by treating others as objects or numbers rather than as people (Kahili, 1988; Maslach, 1982). According to Lee and Ashforth (1990), depersonalization constitutes one form of defensive behavior, defined as

reactive and protective actions intended to avoid an unwanted demand or reduce a perceived threat. Thus, depersonalization was predicted to be associated with psychological strain and escape as a method of coping. In view of the above theories, by means of depersonalization, teachers attempt to avoid an unwanted demand or reduce a perceived threat. Although depersonalization is an attempt to put distance between oneself and service recipients, meanwhile, these protective actions may make them more engaged in their own individual academic research and get higher academic performance, such as publishing research papers and carrying out research projects.

Personal accomplishment represents an aspect of self-efficacy and is thus linked to adjustment to demanding situations (Bandura, 1986). According to Gecas (1989), self-efficacy is associated with the perception of control (i.e., self-appraisal of performance or helplessness) which hinges on beliefs of performance mastery (Meier, 1984). Thus, personal accomplishment is predicted to be positively related to self-appraisal of performance (Lee & Ashforth, 1990). However, not in line with these theories, the current study found that personal accomplishment did not affect any of the measured academic performance variables. Although this result was unexpected, it supported several other studies (Abdullah & Fong, 2011; Wright & Bonnett, 1997; Wright & Cropanzano, 1999). For example, the current finding was consistent with Abdullah and Fong (2011) who also failed to establish a relationship between personal accomplishment and job performance.

Although a growing body of research suggested that job performance has also been linked to organizational commitment (Chen & Francesc, 2003; Meyer & Allen, 1993; Sinclair, Tucker, Cullen, & Wright, 2005), unexpectedly, the current study indicated that, neither overall organizational commitment nor its dimensions affected the measured academic performance variables. Since job performance includes more aspects than the measured academic

performance variables, may be organizational commitment influences other performance variables such as knowledge in subject area(s), students' examination performance, delivery of lessons, classroom management, etc.

5.2.4 The Impact of Organizational Justice on Job Burnout

The present study showed that organizational justice was a strong negative predictor of job burnout ($\beta = .76$), just as hypothesized. This means, if university teachers perceive higher level of organizational justice, they are also inclined to be with higher levels of job burnout. Thus, the more fairly university teachers feel to be treated, the less likely they experience syndrome of emotional exhaustion, reduced personal accomplishment, and depersonalization. This finding supports previous research (Cropanzano et al., 2005; Van Dierendonck, Schaufeli, & Buunk, 2001). From the perspective of equity theory, the psychological process underlying burnout is considered reactions to an inequitable employment relationship. The more inequitable employees perceive their employment relationship to be, the more likely they feel emotionally exhausted (Geurts et al., 1998).

In terms of specific dimensions, the findings of previous research were inconsistent. For example, Cole et al. (2010) showed that distributive and interactional justice negatively related to emotional exhaustion, while procedural justice did not predict emotional exhaustion; nevertheless, Yildirim, Ekinici, and Öter (2012) reported that distributional, procedural, and interactional justice predicted emotional exhaustion, depersonalization, but had no significant relation with personal accomplishment among education supervisor assistants. Brotheridge (2003) observed that the relative impact of procedural justice on emotional exhaustion was greater than that of distributive justice. However, the present study found that interactional justice negatively

predicted emotional exhaustion ($\beta = -.72$) and depersonalization ($\beta = -.52$), and positively predicted personal accomplishment ($\beta = .50$); procedural justice only negatively predicted depersonalization ($\beta = -.15$), while distributive justice did not predict any dimension of job burnout. The research discrepancy may be also partly from the differences in sample, method, and culture, and so on. For example, the subjects of Brotheridge (2003) were government employees, while Yildirim, Ekinci, and Öter (2012) sampled education supervisor assistants. In terms of method, Yildirim, Ekinci, and Öter (2012) used an Organizational Justice Scale developed by Niehoff and Moorman (1993), while in the current study, Colquitt's (2001) OJQ was adopted. For cultural differences, just as aforementioned, Chinese university teachers seemed to more care about the interpersonal and informational factors in the process of decision-making.

5.2.5 The Impact of Job Burnout on Organizational Commitment

The present study showed that job burnout was a strong negative predictor of organizational commitment ($\beta = -.77$). This means, the higher levels of job burnout university teachers experience, the less likely they are committed to the organization. This result was consistent with the previous research (Gemlik et al., 2010; Hakanen, Schaufeli, & Ahola, 2008; Lee & Ashforth, 1993).

In terms of the specific relationships between the dimensions of the two above constructs, Gemlik et al. (2010) carried out a study with the health sector staff in Turkey, utilizing the Turkish version of Allen & Meyer's Organizational Commitment Scale (1990) and Maslach's Burnout Scale (1992). The research revealed that both emotional exhaustion and depersonalization had meaningful descriptive power on affective commitment and normative commitment. In terms of personal accomplishment, Gemlik et al. (2010) found

that it had meaningful descriptive power on affective commitment and continuance commitment.

The present study found that university teachers' emotion exhaustion predicted not only affective commitment ($\beta = -.47$) and normative commitment ($\beta = -.29$), but also continuance commitment ($\beta = .49$). In the current study, university teachers' depersonalization only predicted normative commitment ($\beta = -.19$), not as Gemlik et al.'s (2010) finding that it also predicted continuance commitment. For university teachers' personal accomplishment, the current study showed that it only affected affective commitment ($\beta = .19$), not as Gemlik et al.'s (2010) finding that it also predicted continuance commitment.

The above research discrepancy may be also from the differences in sample, method, and culture. The subjects in Gemlik et al. (2010) were the health sector staff in Turkey, rather than university teachers in China as those in the current study. In addition, in order to examine the effect of job burnout on organizational commitment, Gemlik et al. (2010) utilized analysis of regression, while the current study applied structural equation modeling.

5.2.6 The Impact of Organizational Justice on Organizational Commitment

The present study revealed that organizational justice was not only a positive, but also a strong predictor of organizational commitment ($\beta = .87$), just as hypothesized. This finding means if university teachers perceive higher levels of organizational justice, they are also apt to have higher levels of organizational commitment. That is to say, the more fairly university teachers feel to be treated, the more likely they feel strong sense of belonging to and identification with the organization and, consequently, the more committed they may be to it. The results of the present study supported much previous

research on the impact of organizational justice on organizational commitment (Cohen-Charash & Spector, 2001; Colquitt, 2001; Fulford, 2005; Meyer et al., 2002). Teachers' organizational commitment is the application of organizational commitment in the educational field. It has been identified as one of the most critical factors in the future success of education (Huberman, 1993). It is associated with teachers' performance, absenteeism, and turnover (Chughtai & Zafar, 2006; Firestone, 1996; Khalili & Asmawi, 2012; Louis, 1998; Vandenabeele, 2009; Yew, 2011). Thus, in order to make university teachers give rise to strong belief in the aims of school, and work hard for school beyond individual interest, one important meaningful way should be to improve their perception of organizational justice.

As far as the specific dimensions of the two constructs above, the further findings in the present study also indicated that of the three dimensions of organizational justice, distributive justice had no significant effect on any dimension of organizational commitment; procedural justice significantly influenced affective commitment and normative commitment; while interactional justice significantly influenced all the three dimensions of organizational commitment. On the whole, interactional justice was more strongly related to each dimension of organizational commitment, relative to distributive and procedural justice, however, the previous meta-analysis (Cohen-Charash & Spector, 2001) indicated that it was procedural justice, rather than interactional justice, was more strongly related to organizational commitment. This discrepancy, to certain extent, probably implies that under different cultures, the status of importance of each justice dimension is different. More influenced by collective ideology and Confucianism, Chinese subjects more likely valued interactional justice; while for Occident subjects, given their stronger individualistic values, utilitarianism and human rights awareness, they might pay more attention on procedural justice.

5.2.7 The Mediating Effect of Job Burnout

5.2.7.1 *The Mediating Effect of Overall Job Burnout*

Based on the previous findings, the current study postulated that job burnout played a mediating role in the relationship between organizational justice and organizational commitment. Through structural equation modeling, the current study firstly examined the mediating effect of overall job burnout. The results indicated that overall job burnout, just as expected, acted as a partial mediator between organizational justice and organizational commitment among the participants. Specifically, the path analyses indicated that organizational commitment received not only a .60 positive direct effect from organizational justice, but also a .23 positive indirect effect from organizational justice via job burnout. The total effect of organizational justice on organizational commitment was .83. These findings manifested that job burnout partially mediated the relationship between organizational justice and organizational commitment.

In some ways, the results about the mediating effect of job burnout can enlighten university administrators how to enhance teachers' commitment to the organization. According to this mediating effect of job burnout, university teachers' organizational commitment can be improved not only by means of enhancing their perceptions of organizational justice, but also by means of decreasing the levels of their job burnout via enhancing their perceptions of organizational justice. Organizational justice can directly positively influence organizational commitment; meanwhile, it also can indirectly positively influence organizational commitment via its reducing job burnout. These dual effects make organizational justice a particular antecedent of organizational commitment.

5.2.7.2 *The Mediating Effect of Job Burnout's Dimensions*

In order to explore the deeper mechanism of the mediating effect of job burnout, the current study further examined the mediating effect of job burnout's dimensions. The results showed that emotional exhaustion was a partial mediator between interactional justice and affective commitment, and between interactional justice and normative commitment. In terms of the relationship between interactional justice and continuance commitment, however, not as expected, the effect of emotional exhaustion was full mediating, rather than partial mediating. As far as accomplishment was concerned, its partial mediating effect between interactional justice and affective commitment existed. For depersonalization, the current study found that it was a partial mediator between interactional justice and normative commitment. Whereas, unexpectedly, the current study found that depersonalization was not a mediator between procedural justice and normative commitment because of the two insignificant paths from procedural justice to normative commitment and from procedural justice to depersonalization. Here, distributive justice was not mentioned because, according to the findings mentioned before in the current study, distributive justice neither significantly affected organizational commitment's dimensions nor job burnout's, thus, not to mention its mediating effect.

So far, little research was found about the mediating effect of job burnout on the relationship between organizational justice and organizational commitment except Li (2008). However, it is of note that for organizational commitment, Li (2008) only chose one dimension to study, i.e., *affective commitment*. Li (2008) examined the mediating effect of job burnout by means of linear regression analysis. The results showed that emotional exhaustion and depersonalization were two important partial mediators between distributive

justice and affective commitment. However, accomplishment did not act as a mediator of the relationship between distributive justice and affective commitment. Additionally, emotional exhaustion and accomplishment were important partial mediators between procedural justice and affective commitment. However, depersonalization did not play a mediating role. While for interactional justice, only depersonalization partially mediated the relationship between interactional justice and affective commitment, while emotional exhaustion and accomplishment did not play mediating roles.

Obviously, the findings of Li (2008) were severely not in line with those in the current study. Generally speaking, for probable reasons, beside of the differences in the investigating time and region, the differences in the sample and instrument should also be noted. For example, Li (2008) sampled the employees from Chinese state-owned enterprises and private enterprises as respondents, while for the current study, the respondents were university teachers. Obviously, the living conditions, degree of education, values, and so on, were all different between these two samples. Furthermore, for measuring organizational justice, the current study used the Colquitt's (2001) Organizational Justice Questionnaire (OJQ), while Li (2008) applied another scale adapted from Niehoff and Moorman (1993). For job burnout, Li (2008) adopted MBI-GS, while the current study used MBI-ES. For organizational commitment, the current study examined all the three dimensions by means of scale from Allen and Meyer (1997), while Li (2008) only chose affective commitment to study, and the measure of affective commitment was adapted from Allen and Meyer (1991). In addition, to examine the mediating effect of job burnout, Li (2008) applied linear regression analyses, while the current study conducted structural equation modeling. These differences, undoubtedly, can influence the research results.

5.3 IMPLICATIONS OF THE RESEARCH

The present study mainly examined the relationship between organizational justice, job burnout, and organizational commitment among Chinese university teachers, particularly, corroborated the mediating effect of job burnout between organizational justice and organizational commitment. Meanwhile, the present study explored the effects of certain demographic variables and professional development variables on the former three variables, and also tested the effects of these three variables on certain academic performance variables to prove their importance. The research results and methods provided both theoretical and practical implications.

Theoretically, first, this study confirmed that in the context of Chinese university, the three questionnaires (MBI-ES, OJQ, and OCQ) developed by occidental researchers had cross-cultural applicability. To be noted, when applied to Chinese university teachers, according to the results of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), OJQ only had three dimensions, rather than four dimensions as declared by the original author. The above findings contributed empirical evidence to cross-cultural research on the three specific constructs of interest, meanwhile, also laid the groundwork for further exploring the relationships between these variables and others.

Second, the present study contributed to the empirical research regarding the antecedents and consequences of organizational justice, organizational commitment, and job burnout within the context of Chinese university. Despite the fact that organizational justice, organizational commitment, and job burnout are all important influential factors in the effective functioning of organizations (Greengberg, 1990a), there has been few empirical research on them in a overall structural equation model. As expected, this study revealed

the importance and impact of organizational justice and job burnout in increasing organizational commitment, and particularly, corroborated the mediating effect of job burnout between organizational justice and organizational commitment, thus, enhanced our understanding of the relationship between organizational justice, organizational commitment, and job burnout.

Third, to be noted, the current study applied structural equation modeling (SEM) to test the relationships among the just mentioned variables of interest. SEM tolerates independent variables and dependent variables containing measurement errors, and treats multiple dependent variables simultaneously. Thus, compared with traditional regression analysis, SEM possesses prodigious superiority, enhancing the effectiveness of research results. The current study examined the relationships not only in an overall structural model of overall organizational justice, overall organizational commitment, and overall job burnout, but also in a overall structural model of specific dimensions of the three constructs. To some extent, this method simplified the statistical procedure. Therefore, the current study provided relatively considerate research design for university education researchers.

Fourth, unlike much of the research conducted in controlled laboratory experiments, the present study was carried out within the context of the organization. Since the validity of the results of those laboratory experiments has been questioned, the results in this study provided evidence of validity in the practical organizational setting, specifically, university educational setting.

As for practical implications, the findings of this study provided Chinese university managers with insights into the formation of teachers' organization commitment, as well as with theoretical foundation for decision-making on human resources management (HRM) so as to improve university performance. The results in the current study revealed that except some demographic

variables, job burnout and organizational justice were two important predictors of organizational commitment. Specifically, job burnout negatively affected organizational commitment, while organizational justice positively affected organizational commitment.

First, note that regarding to organizational justice, the present study found that interactional justice was more strongly related to each dimension of organizational commitment, relative to distributive and procedural justice, however, the previous meta-analysis (Cohen-Charash & Spector, 2001) indicated that it was procedural justice, rather than interactional justice, was more strongly related to organizational commitment. This discrepancy, to certain extent, probably implies that under different cultures, the status or importance of each justice dimension is different. More influenced by collective ideology and Confucianism, Chinese subjects more likely valued the interpersonal treatment and communication by management to employees, relative to the distribution of rewards and the process by which rewards were allocated. While for Occident subjects, given their stronger individualistic values, utilitarianism and human rights awareness, they might pay more attention on the distribution of rewards and the process by which rewards were allocated. Therefore, in order to improve Chinese university teachers' organizational commitment, it is reasonable for university managers to think more over interactional justice because of its stronger impact to organizational commitment. For example, university managers should extensively listen to opinions and suggestions from teachers during decision-making, and create more opportunities for teachers to participate in university management. University managers also need to remind themselves of frequently communicating with subordinates and teachers with equal posture, and express respect to them. When decision involves teachers' interests, managers should give them reasonable explanations. Additionally, it also is important to provide

them necessary information about decision-making.

Second, with regard to job burnout, the current study showed that teachers' emotion exhaustion negatively affected affective commitment and normative commitment, while positively affected continuance commitment; teachers' accomplishment positively affects affective commitment, while teachers' depersonalization negatively affects normative commitment. Thus, according to these above findings, in order to improve teachers' organizational commitment, university managers should manage to relieve teachers' job burnout through lots of ways, for example, through reducing their emotional exhaustion. To this end, many specific activities need carrying out, such as developing active university campus culture, advocating correct public voice, adopting various inspiring measures materially and spiritually.

Third, the current study also corroborated the mediating effect of job burnout between organizational justice and organizational commitment. Just as mentioned previously in the current study, this result means organizational justice directly positively influences organizational commitment; meanwhile, it also indirectly positively influences organizational commitment via its reducing job burnout. According to this result, university managers can take advantage of improving teachers' perception of organizational justice to kill two birds with one stone, that is to say, not only to directly increase their organizational commitment, but also to directly reduce job burnout simultaneously, and then through the reduced job burnout to improve indirectly organizational commitment.

Fourth, the current study also examined the effects of several demographic variables on the above three key constructs. The results indicated that most of demographic variables were significantly related to JB, OJ, and OC. Therefore, in order to improve teachers' organizational commitment, university managers should adopt different encouraging measures aimed at

different demographic groups, i.e., should enforce stratified management. This way, the encouraging measures can get better directivity and flexibility. For example, for academic rank, the group *assistant* was significantly higher than the group *instructor* in affective commitment. It is well known, assistants mainly were always young teachers, entering into their posts shortly after graduation, always with higher achievement motivation, work enthusiasm, and thus compared with instructors who worked more years, assistants always had higher level of affective commitment. Therefore, university managers should pay more attentions to improving instructors' affective commitment. Given procedural justice and interactional justice positively affected affective commitment and normative commitment, during decision making, university managers should more frequently communicate with instructors with equal posture. While for assistants, given their higher levels of organizational commitment, university managers should mainly affirm their work enthusiasm, and make them more identify with the value-orientation of the organization.

5.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

As with all empirical research, the current study also has limitations. First, a limitation of the study is based upon methodology, because data were all collected from 6 universities in a single province in China. Therefore, the current study may not be generalizable to other educational settings. Additionally, given the relative loose organizational structures of Chinese universities, and university teachers' irregular work schedules and unfixed work places, following the previous research Laka-Mathebula (2004), the current study adopted the convenience sampling method to obtain the study sample, rather than the more scientific sampling methods such as simple random sampling, stratified random sampling, and cluster random sampling. Although convenience sampling method was effective for distributing and collecting questionnaires, the representativity of the sample might be discounted.

The second limitation of the current study is that it used a cross-sectional design. With the cross-sectional nature of the study, we could not show sound evidence for causal relationships between the variables of interest because data were collected at a single point in time.

Third, just as aforementioned, theoretically, self-report is deemed appropriate to measure these constructs of interest, however, given all variables were measured from a single source, i.e., self-report, there is a chance of common method variance or bias to affect the results. Common method variance can either inflate or deflate observed relationships between constructs, thus leading to both Type I and Type II errors (Chan, 2009; Podsakoff, Mackenzie, Lee, & Podsakoff, 2003; Spector, 2006). According to Camelo Ordaz et al. (2010), the current study adopted Harman's single factor test to examine the effect of common method variance, the results did suggest that

common method variance was not of great concern and thus was unlikely to confound the interpretations of results; however, these analyses did not preclude the possibility of common method variance. Therefore, in order to control common method variance, the variables should be measured trying to avoid single source, meanwhile, different procedural and statistical techniques should be used.

For future research, this study provided a conceptual foundation for research on Chinese university teachers' organizational commitment. Specifically, the current study examined two important antecedents of organizational commitment, i.e., job burnout and organizational justice; meanwhile, also tested the predictability of organizational commitment, job burnout and organizational justice on certain academic performance variables of interest. To be precise, these academic performance variables only belong to job performance, rather than the overall job performance itself. Future research can introduce other variables found to be related to organizational commitment in previous research into the current model to get a broader horizon for commitment research, including personality, work engagement, organizational support, turnover, absenteeism, task performance, organizational citizenship behaviors (OCBs), counterproductive behaviors, and so on. For example, given the predictability of personality variables on job burnout (Zellars, Perrewé, & Hochwarter, 2000), if future research also integrates the Big Five Personality into the current model, may be lead to more exciting findings, and then give deeper and more reasonable explanations for the formation of organizational commitment.

Of course, it is better to carry out, if it is possible, longitudinal studies to examine the continuity of the responses and to observe changes that occur over time (Zikmund, 1997). In reality, participants' perceptions of justice, levels of job burnout, and their commitment to organization should be variable over

time with the changes of organizational environment, and may be after a considerable length of time, their organizational commitment in turn affects their perception of organizational justice or/and job burnout. Thus, in order to determine the final causality between the just mentioned variables, longitudinal research design needs recommending for future research.

Finally, the current study initially intended to carry out a cross-cultural investigation both in China and in Spain so as to compare and analyze university teachers' response differences between East World and West World, and further to get better understanding about the differences in social culture and psychology between the two Worlds. However, given the limitations of research period and realistic conditions, as a result, the current study did not realize this kind of ideal project. Therefore, future research can continue this attractive plan where feasible, and really carry out a cross-cultural research on the variables of interest in the current study.

5.5 CONCLUSIONS

In view of the importance of organizational commitment, university administrators should pay more attention to strengthen teachers' commitment to their schools. From this perspective, the primary purpose of this study was to investigate the relationship between organizational justice, job burnout, and organizational commitment among Chinese university teachers in order to provide guidelines to help university administrators better understand how to reduce teachers' job burnout and increase their organizational commitment.

The results of the current study provided considerable insight into this relationship. First, the current study examined the reliability and validity of the instruments developed by occidental authors. The results revealed that MBI-es and OCQ had satisfactory reliability and validity when they were applied to Chinese university educators. For Colquitt's (2001) *Organizational Justice Questionnaire* (OJQ), the current study showed that it had satisfactory reliability, while as far as validity was concerned, the items of informational and interpersonal justice scales loaded together onto a single factor, rather than two independent factors as Colquitt (2001) declared. This finding provided empirical evidence for three-dimensional organizational justice.

The current study indicated that among Chinese university teachers, several demographic characteristics, i.e., *age, educational level, length of teaching service, marital status, academic rank, monthly income, situation of promotion* affected organizational justice; three demographic characteristics, i.e., *age, length of teaching service and academic rank*, affected job burnout and organizational commitment.

Furthermore, the current study also examined the effects of organizational justice, job burnout, and organizational commitment on several academic performance variables among the participants. Based on structural equation

modeling, the present study found that overall organizational justice positively affected five out of the total six academic performance variables, i.e., *local projects*, *national projects*, *normal papers*, *core papers*, and *international papers*. In terms of the dimensions of organizational justice, interactional justice negatively affected *local projects* and *books*, while distributive justice positively affected *national projects* and *books*. For procedural justice, the current study found that it positively affected *local projects* and *core papers*.

With regard to job burnout, the current study found that overall job burnout negatively affected *core papers*, while for the three dimensions of job burnout, emotional exhaustion negatively affected *national projects*, *normal papers*, and *core papers*, depersonalization positively affected *national projects*, *international papers*, and *normal papers*, while personal accomplishment did not affect anyone of the measured academic performance variables.

Unexpectedly, the current study found that, as for organizational commitment, neither overall organizational commitment nor its dimensions affected the measured academic performance variables. On the whole, the current study demonstrated that, compared to job burnout and organizational commitment, organizational justice more affected academic performance. This result suggests that in order to improve teachers' job performance, university administrators should particularly pay more attention to enhance teachers' perception of organizational justice.

In regard to the relationship between organizational justice and job burnout, the current study showed that organizational justice negatively predicted job burnout. Thus, in order to reduce university teachers' job burnout, the administrators should improve teachers' perception of organizational justice.

In terms of the relationship between dimensions of the two structures, i.e.,

organizational justice and job burnout, the present study further found that interactional justice negatively predicted emotional exhaustion and depersonalization, and positively predicted personal accomplishment, while procedural justice only negatively predicted depersonalization. However, distributive justice did not predict any dimension of job burnout.

The present study supported the previous studies and showed that job burnout was a strong negative predictor of organizational commitment. Therefore, in order to improve teachers' organizational commitment, university administrators should try to alleviate teachers' job burnout.

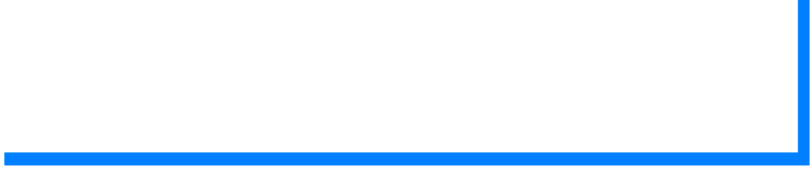
As for the relationship between organizational justice and organizational commitment, the current study firstly revealed that organizational justice was not only a positive, but also a strong predictor of organizational commitment. Thus, in order to improve university teachers' loyalty and commitment to the organization, one important considerable way should be to improve their perception of organizational justice.

For the specific dimensions of organizational justice and organizational commitment, the present study indicated that among the three dimensions of organizational justice, distributive justice had no significant effect on any dimension of organizational commitment; while interactional justice significantly influenced all the three dimensions of organizational commitment, and procedural justice significantly influenced affective commitment and normative commitment.

The current study manifested, job burnout partially mediated the relationship between organizational justice and organizational commitment, just as the expectation. What is more, emotional exhaustion was an important partial mediator between interactional justice and affective commitment and between interactional justice and normative commitment; while between interactional justice and continuance commitment, emotional exhaustion

played full mediating role. As far as accomplishment and depersonalization were concerned, the former partially mediated the relationship between interactional justice and affective commitment, while the latter was a partial mediator between interactional justice and normative commitment. In some ways, the above results about the mediating effect of job burnout offered university supervisors important empirical ground for enhancing teachers' organizational commitment through adjusting the levels of their organizational justice and job burnout.

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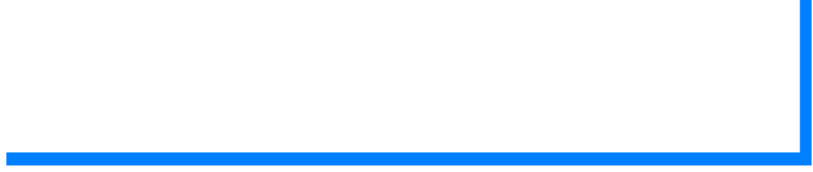
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Appendixes



Appendix: A Instruments (English Version)

You are being asked to participate in a survey to provide the current study with information that will help improve the working environment for teachers. Participation in this survey is voluntary and confidentially is assured. No individual data will be reported. THANK YOU!

Please indicate the extent of your agreement or disagreement with each statement by ticking a number with “ √ ”. Please do not put your name on this questionnaire.

Section I Colquitt (2001) organizational justice questionnaire

	The following items refer to the procedures used to arrive at your (outcome). To what extent:	1	2	3	4	5
	<i>Procedural justice</i>					
1	Have you been able to express your views and feelings during those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Have you had influence over the (outcome) arrived at by those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Have those procedures been applied consistently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Have those procedures been free of bias?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Have those procedures been based on accurate information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Have you been able to appeal the (outcome) arrived at by those procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Have those procedures upheld ethical and moral standards?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>Distributive justice</i>					
8	Does your (outcome) reflect the effort you have put into your work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Is your (outcome) appropriate for the work you have completed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Does your (outcome) reflect what you have contributed to the organization?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Is your (outcome) justified, given your performance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>Interpersonal justice</i>					
12	Has (he/she) treated you in a polite manner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Has (he/she) treated you with dignity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Has (he/she) treated you with respect?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Has (he/she) refrained from improper remarks or comments?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>Informational justice</i>					
16	Has (he/she) been candid in (his/her) communications with you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Has (he/she) explained the procedures thoroughly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Were (his/her) explanations regarding the procedures reasonable?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	Has (he/she) communicated details in a timely manner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note. All items use a 5-point scale with anchors of 1 = to a small extent and 5 = to a large extent

Section II MBI-ES

0	1	2	3	4	5	6
Never	A few times a year	Once a month or less	A few times a month	Once a week	A few times a week	Every day

		0	1	2	3	4	5	6
1	I feel emotionally drained from my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I feel used up at the end of the workday.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	I feel fatigued when I get up in the morning and have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	I can easily understand how my students feel about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	I feel I treat some students as if they were impersonal objects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Working with people all day is really a strain on me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	I deal very effectively with the problems of my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I feel burned out from my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I feel I'm positively influencing other people's lives through my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	I've become more callous toward people since I took this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	I worry that this job is hardening me emotionally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	I feel very energetic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	I feel frustrated by my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	I feel I'm working too hard on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	I don't really care what happens to some students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	working with people directly puts too much stress on me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	I can easily create a relaxed atmosphere with my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	I feel exhilarated after working closely with my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	I have accomplished many worthwhile things in this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	I feel like I'm at the end of my rope.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	In my work, I deal with emotional problems very calmly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	I feel students blame me for some of their problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section III Organizational Commitment Scale: Meyer & Allen (1997)

0	1	2	3	4
Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree

		0	1	2	3	4
1	It would be very hard for me to leave my organization right now, even if I	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I do not feel any obligation to remain with my current employer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	I would be very happy to spend the rest of my career with this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	One of the few negative consequences of leaving this organization would be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Even if it were to my advantage, I do not feel it would be right to leave my	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I really feel as if this organization's problems are my own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Right now, staying with my organization is a matter of necessity as much as	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I do not feel a strong sense of "belonging" to my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I feel that I have too few options to consider leaving this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	I do not feel "emotionally attached" to this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	I would feel guilty if I left my organization now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	I do not feel like "part of the family" at my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	This organization deserves my loyalty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	If I had not already put so much of myself into this organization, I might	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Would not leave my organization right now because I have a sense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	This organization has a great deal of personal meaning for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Too much of my life would be disrupted if I decided I wanted to leave	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	I owe a great deal to my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section IV Demographic and Academic Information

The following is general demographic information that will be used to analyze survey responses at the group level. Please check the appropriate box for each question.

Gender:

☐ Male ☐ Female

Age:

☐ ≤ 30 years ☐ 31-40 years ☐ ≥ 41 years

Length of Teaching Service:

☐ ≤ 2 years ☐ 3-5 years ☐ 6-10 years ☐ ≥ 11 years

Marital status:

☐ Married ☐ Single

Level of education:

☐ Bachelor ☐ Master ☐ Doctor

Academic rank:

☐ Associate lecturer ☐ Lecturer ☐ Associate Professor or Professor

Monthly Income:

☐ ≤ 3000 CNY ☐ 3000-5000 CNY ☐ ≥ 5000 CNY

The annual number of academic papers published internationally during the recent three years:

☐ 0 ☐ 1-2 ☐ 3-4 ☐ ≥ 5

The annual number of academic papers published in core journals domestically during the recent three years:

☐ 0 ☐ 1-2 ☐ 3-4 ☐ ≥ 5

The annual number of academic papers published in general journals domestically during the recent three years:

☐ ≤ 2 ☐ 3-5 ☐ 6-10 ☐ ≥ 10

The number of academic books published during the recent three years:

☐ 0 ☐ 1-2 ☐ 3-4 ☐ ≥ 5

The number of national research projects you presided or taken part in during the recent three years:

☐ 0 ☐ 1-2 ☐ 3-4 ☐ ≥ 5

The number of provincial and municipal research projects you presided or taken part in during the recent three years:

☐ 0 ☐ 1-2 ☐ 3-4 ☐ ≥ 5

Note: Please check up carefully lest some questions be missing. Thanks a lot for your cooperation!

Appendix: B Instruments (Chinese Version)

教师工作状况调查问卷

尊敬的老师：

您好！本问卷旨在了解目前高校教师的工作状况及对所在学校和工作看法。您所填写的资料，无所谓对错，数据只作综合分析，不作个别探究，纯供学术研究之用。请您据实填答，您的意见非常宝贵，感谢您的支持与合作！此问卷共 4 页，估计需要您 5-7 分钟的时间。

如您有任何疑问和建议请联系——李永占 E-mail: liyongzhan@126.com

注：纸质版问卷请在选项前相应的“○”上划“√”。

第一部分 教师组织公平感调查

请您根据在学校工作的实际感受，选择在多大程度上同意或不同意以下所述，然后勾选相应的选项。

		1	2	3	4	5
		完全不符合	不太符合	不确定	比较符合	完全符合
		1	2	3	4	5
1	当领导制定与我的工作有关的决策时，我可以发表自己的看	○	○	○	○	○
2	当领导制定与我有关的决策时，我对决策结果有影响力。	○	○	○	○	○
3	我可以对领导制定的工作决策提出质疑和申诉。	○	○	○	○	○
4	领导制定工作决策所依据的信息是准确的。	○	○	○	○	○
5	领导制定的工作决策符合伦理道德标准。	○	○	○	○	○
6	在我们单位，制度的实施会保持连贯性。	○	○	○	○	○
7	在我们单位，制度的实施不会因人而异。	○	○	○	○	○
8	我的薪酬反映了我在工作中的努力程度。	○	○	○	○	○
9	我的薪酬反映了我对单位的贡献。	○	○	○	○	○
10	就我的工作量和工作责任而言，我的薪酬是公平合理的。	○	○	○	○	○
11	就我的工作表现而言，我的薪酬是公平合理的。	○	○	○	○	○
12	领导能够有礼貌地对待我。	○	○	○	○	○
13	领导能够考虑我的尊严。	○	○	○	○	○
14	领导尊重我。	○	○	○	○	○
15	领导没有对我做出不恰当的评论。	○	○	○	○	○
16	领导能够坦诚地与我进行沟通。	○	○	○	○	○

17	领导详尽解释了与我的工作有关的决定。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	领导对工作决定的解释是合理的。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	对工作决定中的的细节问题，领导能及时与我进行交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	领导会根据个人的特定需求与员工进行交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

第二部分 教师工作状况调查

下面总共有 22 项描述，请您根据您自身的感受和体会，判断它们在您身上发生的频率。

如果您从来没有这种想法或体会，请选择 0；如果您有这种想法或体会，请选择合适的数字。

0	1	2	3	4	5	6
从不	极少一年几次或更少	偶尔一个月一次或更少	经常一个月几次	频繁每星期一次	非常频繁一星期几次	每天

		0	1	2	3	4	5	6
1	我感到自己的感情已经在工作中耗尽了。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	我常在工作一整天后，感到精疲力竭。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	我每天晨起想到要面对一天的工作时，就无精打彩。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	我能容易地就了解学生对事情的感受和想法。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	我感到对待有些学生象对待没有生命的物体一样。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	对我而言，跟他人一起工作一整天，令人感到紧张。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	我能很有效地处理学生的问题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	我的工作让我感到倦怠。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	我觉得我能透过我的工作正面地影响其他人生活。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	自从从事教学工作后，使我对其他人变得更为冷淡。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	我担心教育这项工作使我对什么事都失去感情。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	我感到精力充沛。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	我的工作让我感到挫折沮丧。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	在工作上我感到心力耗尽。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	对于一些学生发生了什么事，我一点都不在乎。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	直接与人交往的教育工作对我来讲压力太大。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	我能轻易地与我的学生创造轻松气氛。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	与我的学生密切合作后，令我感到兴奋快活。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	我在学校教育工作中，已完成了许多有意义的事情。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	工作让我有快崩溃的感觉。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	在我的工作中，我能非常冷静地处理情绪问题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	我感到学生因为某些他们的问题而责备我。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

第三部分 教师组织承诺调查

请您根据在学校工作的实际感受，选择在多大程度上同意或不同意以下所述，然后勾选相应的选项。

		0	1	2	3	4
		完全不符合	不太符合	不确定	比较符合	完全符合
		0	1	2	3	4
1	即使心里很想，但现在就要我离开目前的组织还真难	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	我不觉得有任何义务继续留在这个组织工作	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	我很愿意今后一直在这个组织工作	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	如果离开目前的组织，我可能连这样的工作也找不到	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	即使对我有利，我也不觉得离开目前的组织是对的	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	我觉得组织的问题就是我的问题	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	目前来说，留在组织是一件很无奈的事	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	对于目前的组织，我并没有强烈归属感	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	如果离开目前的组织，我将没有其他工作机会	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	我觉得对目前的组织没有什么情感依恋	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	如果现在离开这个组织，我会有负罪感的	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	我不觉得自己是这个组织的一分子	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	这个组织值得我对它忠诚	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	如果不是已在组织付出太多心力，我可能会考虑去别处工作	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	我不会离开这个组织，因为我必须对组织内的其他人负责	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	这个单位对我而言有着非同寻常的个人意义	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	一旦我决定离开现在的单位，我生活中的很多事情将会被打乱	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	这个组织有恩于我	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

第四部分 个人基本信息

以下个人基本信息仅用来进行群组水平的统计分析，请您根据自己的情况选择合适的选项：

性别：

☐ 男 ☐ 女

年龄:

☐ ≤30岁 ☐ 31-40岁 ☐ ≥41岁

教龄:

☐ ≤2年 ☐ 3-5年 ☐ 6-10年 ☐ ≥11年

婚姻:

☐ 未婚 ☐ 已婚

学历:

☐ 本科 ☐ 硕士 ☐ 博士

职称:

☐ 助教 ☐ 讲师 ☐ 副教授或教授

月收入:

☐ ≤3000 元 ☐ 3000-5000 元 ☐ ≥5000 元

近三年内是否有职称职务上的晋升:

☐ 有较大晋升 ☐ 有所调整 ☐ 没有晋升

近三年来平均每年在国际期刊上发表的论文数量:

☐ 无 ☐ 1-2 篇 ☐ 3-4 篇 ☐ 5 篇及以上

近三年来平均每年在国内核心期刊上发表的论文数量:

☐ 无 ☐ 1-2 篇 ☐ 3-4 篇 ☐ 5 篇及以上

近三年来平均每年在国内普通期刊上发表的论文数量:

☐ 少于 2 篇 ☐ 3-5 篇 ☐ 6-10 篇 ☐ 11 篇及以上

近三年来出版的图书论著数量:

☐ 无 ☐ 1-2 本 ☐ 3-4 本 ☐ 5 本及以上

近三年来平均每年主持或参与的国家级(含部级)科研课题项目数量:

☐ 无 ☐ 1-2 个 ☐ 3-4 个 ☐ 5 个及以上

近三年来平均每年主持或参与的省市级科研课题项目数量:

☐ 无 ☐ 1-2 个 ☐ 3-4 个 ☐ 5 个及以上

提示: 请仔细检查, 以免漏选。衷心感谢您的支持与合作!